The Croonian Lectures

ON THE

CHEMISTRY AND THERAPEUTICS OF URIC-ACID GRAVEL AND GOUT.

Delivered before the Royal College of Physicians of London,

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LECTURE II.

CHEMISTRY OF URIC-ACID GRAVEL. — PROPHYLACTIC TREATMENT.

MR. PRESIDENT AND GENTLEMEN,—In the preceding lecture I laid before you an account of those points in the chemistry of uric acid and the urates which seemed to have a bearing on the subject matter of these lectures. I showed that there were three orders of uric-acid salts, that in addition to the neutral urates and bi-urates, which had long been recognised, there existed a third order—namely, the quadri-urates, which in reactions and chemical constitution differed widely from the other two. It was pointed out that the neutral urates, from their mode of origin and reactions, could not, with our present knowledge, be regarded as having any possible concern in the vital history of uric acid. It was also pointed out that the bi-urates, although known to us pathologically as constituents of gouty concretions, were not really known to us with certainty as physiological constituents—neither of the blood nor of the urine. On the other hand, it was shown that the quadri-urates existed normally in human urine, and in the urine of birds and serpents; and it will be demonstrated later on that when uric acid is brought into relation with the bodily fluids—with the blood, lymph, and synovia—it enters into solution in the first instance, not as neutral urate nor as bi-urate, but as quadri-urate. From all these considerations it would appear that whenever and wherever uric acid exists in the healthy organism it exists exclusively as a quadri-urate. The quadri-urates may therefore be regarded as being in a special sense the physiological salts of uric acid, and as constituting the only form in which uric acid subsists in the living body in the normal state. It may, moreover, be further inferred that when uric acid gives trouble and originates morbid phenomena, the mischief arises proximately from the uric acid departing, in one direction or other, from this normal state of combination.

I now proceed to consider more particularly the state of uric acid in human urine—the conditions which surround it, and the factors which tend to determine its precipitation or to prevent its precipitation in that fluid.

Inherent Tendency of Urine to the Spontaneous Liberation and Precipitation of its Uric Acid.—The chemical reactions and physical conditions which are concerned in the production of uric-acid concretions are both varied and complex. Uric acid exists in the urine in combination with the alkaline bases. In perfect health these combinations maintain their integrity, not only while the urine is detained in the urinary channels, but even for some considerable time after it has been discharged. This, however, is not always the case. In certain contingencies these combinations are prematurely decomposed; their uric acid is set free and is precipitated from the urine in the crystalline form. In calculous subjects this event takes place in the kidneys or bladder, and gives rise to the incidents of gravel. In less urgent instances the precipitation takes place soon after the urine is voided, in the form of copious urinary deposits. But apart from these pathological cases, and cases which hover on the pathological borderland, it may be shown that perfectly normal urines betray the same tendency. A considerable series of observations were made on this point with the urines of persons who were entirely free from any proclivity to calculous disorders. It was found that all acid urines, provided they were guarded against septic changes, invariably deposited their uric acid sooner or later. The time of the occurrence of the precipitation varied greatly. It usually began within twenty-four hours after the urine was voided, sometimes in a day or two, and sometimes it was delayed for a week or even longer. When the process was at length completed—whether that was early or late—all the uric acid had disappeared from solution; the filtered supernatant urine gave not the slightest precipitate with hydrochloric acid, nor could there be detected in it, on evaporation to a small bulk and with careful search, any trace of uric acid. We must therefore recognise in normal acid urines an inherent tendency to the liberation and precipitation of their uric acid. This tendency only assumes a morbid significance when the event occurs prematurely, while the urine is still sojourning in the kidneys or bladder. Viewed in this light pathological gravel may be regarded as due to an exaggeration of conditions which prevail, in a less pronounced degree, in the normal state; and an elucidation of these conditions may be reasonably expected to throw a light on the ætiology of gravel and calculus, and perhaps furnish hints which may be turned to therapeutical uses.

Chemical Explanation of the Spontaneous Precipitation of Uric Acid in Urine.—The chemical reactions which are concerned in the spontaneous precipitation of uric acid in acid urines are very interesting to trace out. It may be proved that uric acid always subsists in the unchanged urine as a quadri-urate. The urine in which this substance is dissolved is a watery solution, which contains a number of mineral salts. Among the salts the most important, in regard to the point under consideration, are the alkaline phosphates. These regulate, in the main at least, the reaction of the urine. The phosphates easily oscillate between the monometallic forms or superphosphates which have an acid reaction, and the dimetallic forms which have an alkaline reaction. When the former preponderate, as is usually the case, the urine is acid; when the latter preponderate the urine is alkaline. We have therefore in an acid urine the quadri-urate existing in the presence of water and of superphosphates. These conditions ensure the ultimate complete liberation of the uric acid. The first step in the process is the splitting up of the quadri-urate by the action of the water of the urine into free uric acid and bi-urate. By this reaction half the uric acid is set free. But the bi-urate resulting from this reaction is immediately retransformed in the presence of superphosphate, by a double decomposition, into quadri-urate. Two atoms of bi-urate with one atom of superphosphate (mono-metallic phosphate) change into one atom of quadri-urate and one atom of dimetallic phosphate, according to the subjoined equation:

$$2(MH\bar{u}) + (MH_2PO_4) = (H_2\bar{u}, MH\bar{u}) + (M_2HPO_4)$$

Bi-urate ... Mono-metallic phosphate ... Quadri-urate ... Di-metallic phosphate.

These alternating reactions—breaking up of quadri-urate by water into bi-urate and free uric acid, and recomposition of quadri-urate by double decomposition of bi-urate with mono-metallic phosphate—go on progressively until all the uric acid is set free.[1]

THE INGREDIENTS WHICH RETARD THE DECOMPOSITION OF THE QUADRI-URATES IN NORMAL URINE.

It has just been shown that uric acid exists in the urine in the form of quadri-urate, and that when the urine is secreted with an acid reaction—that is to say, for some sixteen or twenty hours out of the twenty-four—this compound exists amid conditions which, if they stood alone and uncontrolled, would lead to speedy precipitation of uric acid in the free state. But in the normal course no such speedy precipitation occurs; it only occurs as a remote and postponed event after the urine has been voided. It is obvious, therefore, that the urine contains certain ingredients which inhibit or greatly retard the water of it from breaking up the quadri-urates. Were it not for the presence of these inhibitory ingredients uric acid would be thrown out daily in the urinary passages, and everyone would be subject to gravel. Hence an inquiry into the nature of these inhibitory agents has a pathological as well as a physiological interest, and bears directly on the ætiology of calculous disorders. The inquiry is not a simple one. The urine is a very complex fluid. It contains, besides urea, a number of saline constituents, together with pigmentary and other extractives. Where among all these are

[1] For full proof of this reaction I must refer the reader to my paper on the History of Uric Acid in the Urine, Med. Chir. Trans., vol. lxxiii. p. 258.

the inhibitory agents to be found? Attention was first directed to the *saline constituents*. It was found that when urine was dialysed, whereby its crystalline ingredients were for the most part removed, it lost to a considerable extent its power of retarding the decomposition of the quadri-urates. This observation indicated that the inhibitory power resided, partly at least, in the crystalloids of the urine. The chief crystalloids of the urine are urea, and the chlorides, phosphates, and sulphates of potash, soda, ammonia, lime, and magnesia. Solutions of these several substances in distilled water were prepared, and their effect on the quadri-urate was tested in the following manner. A speck of a purified specimen of the amorphous urate deposit was placed on a glass slide and intimately mixed with a drop of the solution to be tested. The covering glass was then applied and the result watched under the microscope. The time at which crystals of uric acid began to make their appearance was taken as a measure of the activity of the tested solution in decomposing the quadri-urate. The standard of comparison was distilled water, which usually caused crystals to appear in five minutes. Solutions of urea of various strengths acted precisely with the same speed as distilled water. It was obvious that urea had no share in the power resident in urine of retarding the decomposition of the quadri-urate. The chlorides and sulphates, in the proportion of 1 per cent. and upwards, imparted to water a considerable power of delaying the appearance of crystals. The potash salts were found to have more effect in this respect than the corresponding salts of ammonia and soda. The common di-sodic phosphate (rendered perfectly neutral to test-paper by the addition of phosphoric acid) showed about the same inhibitory power as sodium chloride. None of these solutions, nor any admixture of them, approached the natural urine in power of postponing the decomposition of the amorphous urate. More pronounced effects were obtained with the di-potassic phosphate. A solution of this salt, containing only 0·2 per cent. and perfectly neutralised, appeared to act almost as slowly on the deposit as a normal acid urine. Urines which were alkaline from fixed alkali had absolutely no decomposing effect on the amorphous urate. Attention was next turned to the *colouring matters* of the urine. The amorphous urates have an intense affinity for urinary pigment; the pigment cannot be removed from them by any solvent which does not at the same time destroy their integrity. I had noticed that deeply tinted urates were more slowly decomposed by water than pale-coloured urates. It had also been noticed that artificially prepared quadri-urates and the quadri-urates which constitute the urinary secretion of birds and serpents, all of which are devoid of colouring matters, are much more quickly broken up by water than the natural amorphous urate, which is always more or less tinted. Moreover, it was found that a urine which had been filtered through animal charcoal and thus deprived of its pigment acted very much more rapidly on the amorphous urate deposit than the same urine before it had been filtered through charcoal. It can, therefore, scarcely be doubted that the pigments of the urine play an important part among the ingredients which impart to normal urine its remarkable power of retarding the decomposition of the amorphous urate. In the febrile state and in other wasting disorders the urine is sharply acid and rich in urates, and yet such urines are not prone to deposit free uric acid, though very prone to deposit amorphous urates. In these cases the urine is always deeply coloured; and the pigments are probably the chief agents which prevent the precipitation of free uric acid under these circumstances.

CHEMICAL ETIOLOGY OF URIC-ACID GRAVEL.

The more remote and predisposing causes of gravel do not come within the scope of the present inquiry. Whatever these causes may be, they must be translated into changes in the composition of the urine before they can determine the occurrence of calculous accidents. No amount of morbid proclivity to uric-acid gravel can take effect if the urine be alkaline, nor if the proportion of uric acid in it fall below a certain point. The causes which will be here considered are those which lie exclusively in the chemical constitution of the urine itself. I have just given proof that the salines and pigments of the urine exercise a protective influence against premature precipitation of uric acid; and it may hence be inferred that a diminution of these salines and pigments may sometimes act, in a negative manner, as a determining factor in the production of gravel and stone.

Poverty of the urine in saline matters. — This is probably an influential factor in the disproportionate frequency of stone among the children of the poor as compared with the children of the well-to-do classes. The prevalence of stone among the natives of India is also probably to be explained in the same way. The children of the poor are fed largely on farinaceous articles—bread, gruel, oatmeal, and potatoes, with but a scanty allowance of milk, meat, and fish. Wheat-flour contains only 0·51 per cent. of mineral matter in proportion to the totality of the dry substance; oatmeal only 2·50 per cent.; potatoes only 2·50 per cent.; whereas milk contains 5·50 per cent., and the various forms of meat and fish 5 to 5·50 per cent. Rice, which forms so large a part of the diet of the natives of India, only contains 0·39 per cent. of mineral matter in proportion to the totality of the dry substance of the grain. These enormous differences in the amount of saline ingredients in the articles of food must of course make a corresponding difference in the proportion of the saline constituents of the urine, because saline matters pass out of the body almost exclusively through the kidneys. On the other hand, the well-known immunity enjoyed by sailors from stone and gravel depends, no doubt, as Mr. Plowright has shown, on the prodigious quantity of salt which seafaring men habitually consume with their food. The same observer has pointed out that the dwellers in a district of Norfolk called Marshland, where the drinking water is brackish, are singularly free from stone, as compared with their less fortunate neighbours in the adjacent districts of that county.[2]

Deficiency of Pigment in the Urine.—In chronic Bright's disease, with contracting kidneys, the urine is conspicuously pale, and is often indeed almost entirely devoid of pigment. There is no excess, but rather a diminution of the uric acid in the urine in these cases; nevertheless, deposits of uric acid are by no means uncommon, and sometimes actual renal gravel occurs. The percentage of salines is also low, and this doubtless contributes to the result; but probably the prepotent factor in the precipitation of uric acid in these cases is the deficiency of pigment in the urine.

Poverty of the urine in salines and pigments, however, only accounts for certain limited groups of calculous cases. There are other and larger groups in which the urine is neither defective in salts nor in colouring matters. The subjects of calculous disorders among the well-to-do classes—especially those of a gouty type—usually void a urine which is full coloured and abundantly rich in salts, and we must seek in some other direction for the cause of the morbid tendency. In these cases the chief determining factors are, I believe, to be found in the proportion of uric acid in the urine and in the degree of acidity of the urine. The influence of these two factors was investigated by a method which approximates pretty closely to the conditions of the actual clinical problem. In the earlier part of the lecture I showed that normal acid urines tended to deposit uric acid sooner or later; and the inference was drawn that this inherent tendency was the same in kind, though not so pronounced in degree, as the tendency existing in pathological gravel. If this inference be well founded, it follows that the controlling factors in the two cases are similar, and that the conditions which hasten or retard the precipitation of uric acid in a sample of urine preserved in a test-tube would, if they could be made applicable, hasten or retard the precipitation of uric acid in the urinary passages. The mode of experimentation was as follows: A series of test-tubes were each charged with 10 cc. of a normal acid urine. One of them was a control tube and had no addition made to it. To the others additions were made of known quantities of various substances, of which it was desired to know the effects on the time of onset of uric-acid precipitation. The contents of the tubes were protected against decomposing changes by the inclusion of a few drops of chloroform. The tubes were then corked and placed in the warm chamber at blood heat. The tubes were frequently examined, and the time when uric acid began to be deposited was noted. When the experiment was finished the acceleration or postponement of precipitation in the several tubes, as compared with the control tube, was computed.

Proportion of Uric Acid in the Urine.—A sharp distinction must be drawn between the proportion or per-

[2] See a paper by Mr. C. Plowright of King's Lynn, in the *Medical Times* for Oct. 10th, 1868.

centage of uric acid in the urine and its rate of secretion—that is, the total quantity excreted per hour or per day. The proportion of uric acid in the urine bears no constant relation to the rate of its excretion by the kidneys. During the digestion and absorption of food the hourly discharge of uric acid reaches its highest level, but its percentage in the urine is not at its highest, owing to the fuller volume of the urine at this time. On the other hand, after prolonged fasting and during sleep the hourly discharge of uric-acid sinks to its lowest point, but its percentage in the urine touches its highest pitch. Again, the occurrence of uric-acid gravel is not a reliable proof of an excessive output of uric acid; and it is certain that individuals may habitually discharge a daily amount of uric acid considerably beyond the average and yet be quite free from the symptoms of gravel. Nor is such an occurrence even a sure indication that the urine contains an undue percentage of uric acid. Cases are sometimes encountered in which the urine is caught, as it were, in the very act of depositing uric-acid gravel, cases in which the urine, as it is voided, sparkles with crystals of uric acid. On four occasions I have been able to estimate the uric acid in such urines. The results are shown in the following table:—

TABLE VIII.—*Showing the Percentage of Uric Acid in Four Urines which were in the act of depositing Uric Acid at the moment of Emission.*

No. 1 contained	0·084	per cent.	of uric acid.
„ 2 „	0·076	„	„
„ 3 „	0·062	„	„
„ 4 „	0·022	„	„

In the first and second cases the percentage of uric acid greatly exceeded the average, in the third case it was slightly below the average, and in the fourth case it was very much below the average. Notwithstanding all this, it would be an error to suppose that the quantum of uric acid excreted per day and its proportion in the urine are without influence on the formation of urinary concretions. It stands to reason that persons who daily void an excessive amount of uric acid must be more liable than those who only void the normal quantity to crises in which the percentage of that substance rises above the average, and it is susceptible of proof that, other conditions being favourable, a high percentage of uric acid in the urine becomes a potent factor in the determination of uric-acid precipitation. The following observations may be taken as evidence on this point. A healthy urine which had deposited a copious sediment of amorphous urates in a urine-glass was divided into two equal portions, A and B. A consisted of the lower portion which contained the deposit; B consisted of the upper or supernatant portion. Both portions were warmed to blood heat, and became thereby perfectly transparent. Both portions were identical save in one respect—namely, that A contained a much larger percentage of uric acid, in the form of quadri-urates, than B. The specimens were then tested by the method above described. Four test-tubes were charged each with 10 cc. of urine, composed as follows:—Test-tube No. 1 contained A alone, No. 2 contained equal volumes of A and B, No. 3 contained three volumes of A and seven volumes of B, and No. 4 contained B alone. The four test-tubes were then corked and placed in the warm chamber at blood heat. The following table exhibits the times at which uric acid began to precipitate in the several test-tubes.

TABLE IX.—*Showing the Influence of the Percentage of Uric Acid on the Time of Onset of Uric-acid Precipitation.*

Contents of the Test-tubes.	Time when uric acid began to be precipitated.
No. 1 contained A alone	2 hours.
No. 2 contained equal volumes of A and B	4 „
No. 3 contained three volumes of A and seven volumes of B	8 „
No. 4 contained B alone	20 „

Grade of Acidity of the Urine.—The degree of acidity of the urine exercises, as might have been expected, a powerful influence on the time of precipitation of uric acid. In some cases of gravel I found the acidity of the urine fully twice as high as the normal average; in two such cases the urine was found to decompose the purified amorphous urate as rapidly as distilled water; but when its acidity was reduced to the normal level by the addition of sodium carbonate, it had then no more power in this respect than healthy urine, showing clearly that in these cases the determining factor in the disorder was solely excess of acidity. It was also found, experimenting on normal acid urines, that the addition of an exceedingly minute quantity of an alkaline carbonate postponed the time of precipitation of uric acid very notably. The following table displays some of the results obtained by this mode of testing.

TABLE X.—*Showing Postponement of Precipitation of Uric Acid by the Addition of Minute Quantities of Alkaline Carbonates to the Urine.*

Additions made to the urine.	Time when uric acid began to be precipitated.	Postponement of precipitation.
No. 1.—Urine alone—control tube ..	2 hours.	—
No. 2.—Urine + 0·04% pot. bicarb. ..	4 „	2 hours.
No. 3.—Urine + 0·04% sod. bicarb. ..	5 „	3 „
No. 4.—Urine + 0·04% lith. carb. ..	10 „	8 „

The quantities of the alkaline carbonates added in this experiment were so small that the reaction of the urine, as tested by litmus paper, was not sensibly affected; and yet the postponement of precipitation was very considerable—considerable enough, had the events occurred in the urinary passages, to make the difference between the occurrence and non-occurrence of gravel. It will be observed that the sodium carbonate acted more powerfully as a retarder than the potassium carbonate, and that the lithium salt acted more powerfully than either. This, however, was solely due to the difference in their atomic weights. When these salts were used in quantities proportionate to their saturating power no difference could be detected between them. It need scarcely be said that if the carbonates were added in sufficient quantity to render the urine neutral or alkaline no precipitation of uric acid took place. The general results of the above inquiry into the factors which control the precipitation of uric acid in urine, and which operate to determine or to prevent the occurrence of pathological gravel, may be summed up in the following two propositions. The conditions of the urine which tend to accelerate the precipitation of uric acid are high acidity, poverty in salines, low pigmentation and high percentage of uric acid. And, conversely, the conditions which tend to postpone precipitation are depressed acidity, richness in salines, richness in pigments, and low percentage of uric acid. On the interaction of these factors the occurrence or non-occurrence of uric-acid gravel appears to depend; and probably the most important of these factors is the grade of acidity.

THERAPEUTICS OF URIC-ACID GRAVEL.

The treatment of calculous disorders at the hands of the physician must always in the main be of a preventive character. When concretions are once formed in the kidneys or bladder, and these are too large or too awkwardly lodged to be washed out by the flush of the urinary stream, there is little prospect that they can be dissolved away by imparting solvent qualities to the urine. In such circumstances we are constrained to have resort to surgical means; and it is a matter for congratulation that the brilliant advances in the surgery of the kidneys and bladder—advances largely due to the enterprise and skill of British surgeons—enable us now to face this alternative with greatly diminished anxiety. In the domain of prophylaxis, however, there remains to the physician a fruitful field of activity. Nowhere, perhaps, is the aphorism that "prevention is better than cure" more pertinent than in the case of calculous concretions. The force—the chemical force—which is requisite to prevent the precipitation of uric acid in the urinary channels is almost infinitely small as compared with the force which is requisite to redissolve a concretion already formed. In considering the medical treatment of uric-acid gravel it is important to fix our eyes on the urine itself. There is, perhaps, too ready a disposition to look for the determining causes of gravel elsewhere than in the urinary function—in the stomach or in the liver or in some general constitutional vice. It should be borne in mind that uric-acid gravel is constantly seen as an independent disorder, existing *per se* in persons who are in all other respects perfectly healthy. And if gravel be, not unfrequently, complicated, or associated with other morbid conditions, it only conforms in this respect to the common rule applicable to most other disorders. There is, however, no doubt that there exists a special relation between uric-acid gravel and gout; and the circumstance that uric acid figures as a common factor in both

has led certain persons to the opinion that the two complaints are substantially one and the same. This notion is certainly not correct, and from a therapeutic point of view it is, I believe, a mischievous notion. It is a matter of common experience that many gouty people are never troubled with gravel; and, conversely, that many subjects of gravel are never troubled with gout. In both complaints there is an aberration of uric acid; but the error is essentially different in the two cases, both in regard to its site and in regard to its nature. In gout the error occurs on *this* side of the kidneys, in the blood and tissues, and the uric acid is precipitated in a state of combination as a bi-urate. In gravel the error occurs on *that* side of the kidneys, and the uric acid is precipitated in the urine and in the free state. In the former the deposition takes place in the true interior of the economy; in the latter the deposition takes place in what is, strictly speaking, the exterior of the economy—that is to say, on the surface of a doubling of the external integument. These differences are, I believe, radical, and involve important distinctions both in regard to pathology and in regard to treatment. The fact that gout and gravel sometimes exhibit a kind of vicarious correspondence—that the one complaint alternates with the other at different periods in the lifetime of the same individual, or in successive generations of the same family, while indicating an undoubted relation, indicates also at the same time an essential distinction. Speaking from a somewhat long and large experience of these ailments, I cannot recall a single instance in which a paroxysm of gout and a paroxysm of uric-acid gravel broke out synchronously. And Sir Alfred Garrod, with a longer and still larger experience, gives me his testimony to the same effect. Some pertinent evidence on the point we are debating has been brought forward by Mr. Plowright of King's Lynn.[3] He remarks that, residing as he does in Norfolk, the chief stone district in England, he has been struck by the comparatively small number of cases of gout which have come under his notice as compared with the number of stone cases. He further shows, by reference to the Registrar General's Reports, that there is no correspondence between the prevalence of gout and of stone in the several counties of England and Wales. Some of the counties which have a high death-rate from gout have a low death-rate from stone; and, conversely, counties with a high death rate from stone have a low death-rate from gout. In Scotland, where gout is rare, stone is comparatively common.

These considerations lead to the conclusion that gravel should be regarded as a primary vice of the urinary function, that it requires to be studied by and for itself, and that the urine is the proper and natural field for the investigation of its etiology and therapeutics. We have just seen that the factors which chiefly control the precipitation of uric acid in the urine are: the degree of pigmentation, the proportion of salines, the percentage of uric acid, and, above all, the grade of acidity of the urine; and I shall consider the treatment solely with reference to the operation of these four factors.

With regard to the *deficiency of pigments* as a contributory factor in the promotion of uric-acid gravel, I have no facts or suggestions to offer which have a bearing on the therapeutical problem; and I doubt whether any help is to be got from further inquiry in this direction. The subjects of gravel among the well-fed population of this country, as far as my experience goes, present no deficiency of pigment in their urine.

With respect to the *proportion of saline matters* in the urine, it is worth bearing in mind that the evidence gathered by Mr. Plowright, as well as the experimental indications previously adduced by myself, point strongly to the suggestion that the subjects of gravel should be advised to take habitually with their meals as much culinary salt as their palates will tolerate. I may also remind those whose lot it is to practise among the children of the poor or among the rice-eating populations of tropical and subtropical countries, that it would be well, in cases of gravel, to see that the patient's food should contain an adequate proportion of articles rich in saline materials—that is to say, of milk, meat, fish, eggs, and salads.

The *proportion of uric acid* in the urine, as a controlling factor in uric precipitation, demands somewhat more notice. It is a common notion that the occurrence of uric-acid gravel depends simply on an excess of this substance in the urine (so-called uric acid diathesis). This assumption pervades the entire argument of many writers on gravel, and dominates all their plans or treatment. I have already shown that the assumption is only partially true, and that the percentage of uric acid is only a subordinate factor in the determination of uric-acid precipitation. During the alkaline tide after meals the percentage of uric acid in the urine reaches often a high level, and yet there is less risk of precipitation at this time than at any other period of the day. It has, moreover, been demonstrated (see Table VIII.) that uric acid is sometimes thrown down in the urinary channels when its proportion in the urine does not exceed the normal average, or even when it falls considerably below the average. At the same time, it is true that when other favouring conditions coincide, a high level of uric-acid excretion, with a high percentage of it in the urine, is a valid factor in the production of gravel, and that a lowering of that level, if by any means attainable, is an important therapeutical indication. Attempts have been made in this direction by modifications of the diet and regimen. The advice given on this head by various writers is, however, very contradictory. Some recommend that the subjects of uric-acid gravel should avoid sugar and fruit and fat; others that they should take fat in abundance and avoid starchy matters. Some advise a vegetarian diet, others a mixed diet. The most reliable investigations indicate that fat, sugar, and starchy matters have not the slightest direct influence on the production and excretion of uric acid, nor has any proof been given that albuminoid substances of vegetable origin differ in this respect from albuminoid substances of animal origin. The only point that has really been made out is this—that the excretion of uric acid is diminished by lessening the albuminoid ingredients of the food, and that it is heightened by increasing these ingredients. But this class of aliments is absolutely essential to nutrition, and you cannot diminish them to any serious extent without injuriously affecting the nutritive equilibrium. After a careful examination of all the evidence on this point it appeared to me that the practical outcome was only this—that persons who are subject to uric-acid gravel and who are also troubled with a large appetite should seek to allay their cravings and to lessen the intake of nitrogenous material by the free use of farinaceous articles of food, with salads, fruit, and garden vegetables, all of which are comparatively poor in albuminoid constituents. I shall again revert to this subject in my fourth lecture when speaking of the dietetic treatment of gout.

I am satisfied from repeated observations that in the immense majority of cases of uric-acid gravel in this country the immediate determining cause of the precipitation is *excessive acidity of the urine*, and that the paramount indication of preventive treatment is to diminish this acidity. All other schemes of treatment sink into insignificance in comparison with this. The use of alkalising agents for the prevention of uric-acid gravel stands on a perfectly rational basis. It is chemically impossible for uric acid to be deposited from an alkaline urine; it may even be said that it is impossible for uric acid to be deposited prematurely—that is to say, within the urinary channels—from a neutral or feebly acid urine. And as we possess the means of harmlessly reducing the acidity of the urine at pleasure, we have in our hands, in principle at least, the absolute power of preventing uric-acid gravel. There are, however, some practical difficulties to be overcome. The disposition to uric-acid gravel has a certain persistency. It may last intermittently for months or years, and it would obviously be too great a strain on a treatment which is purely protective to require that a patient should take antacid medicines in sufficient doses and at sufficiently short intervals to maintain the urine continuously alkaline or neutral over so long a period of time. Nor is any such effort necessary. A study of the normal oscillations of the urine at different periods of the day and night leads to the inference that the liability to uric-acid gravel rises to a dangerous intensity only during certain limited portions of the twenty-four hours. The risk in gravel is almost confined to precipitations which take place within the precincts of the kidneys. Precipitations which take place in the bladder are harmlessly swept out at the next act of micturition. These latter probably only do harm when there is already a stone in the bladder to which the crystals

[3] On the Cause and Distribution of Calculous Disease. By Charles B. Plowright. London, 1883. Page 14.

can accrete, or when a pouch exists in the viscus to receive and detain the deposit. What most concerns us, therefore, is the state of the urine as secreted by the kidneys rather than the state of the product accumulated in the bladder. For the sake of brevity and by way of distinction, we may be allowed to speak of *renal urine* and *vesical urine*. These two products no doubt usually correspond sufficiently closely to enable us to judge from the urine of micturition what the character is of the urine secreted by the kidneys; but this is not always the case. Vesical urine represents the aggregate work of the kidneys for several consecutive hours. During this interval the renal urine may have undergone sharp oscillations, from acid to alkaline, from dilute to concentrated, from richness to poverty in uric acid, but the vesical accumulation which is at length discharged by micturition will have a mean or average composition which entirely masks these oscillations. To arrive at a correct knowledge of the state of the urine as it flows from the kidneys it is necessary to obtain the secretion and to examine it at short intervals. Some years ago I made an extended series of observations on these lines. The subject of experiment was a healthy man of twenty-eight. The urine was collected at hourly, or at most two-hourly, intervals throughout the twenty-four hours—except during the period of sleep, which was taken at a single interval. The inquiry embraced observations on thirty-two complete days, besides a good many more on portions of days. The results of the investigation were incorporated in two papers published in the Memoirs of the Manchester Literary and Philosophical Society[4] and in the *Edinburgh Medical Journal*.[5] Some of the conclusions arrived at have a direct bearing on the preventive treatment of urinary gravel. The character of the urine was shown to be most affected by the digestion of food, by prolonged fasting, and by sleep. It was found that a meal, whether it was composed of ordinary mixed food or of purely animal or purely vegetable substances, produced two constant effects—it depressed the acidity of the urine and increased its volume. And, conversely, prolonged fasting raised the acidity and diminished the flow of the urine. During the hours of sleep, which are also of course hours of fasting, the acidity of the urine reached its highest point and the flow of the urine reached its lowest point. The proportion of uric acid in the urine—that is to say, its percentage—was found highest during the time of sleep, but the hourly excretion was highest during the hours following a meal. Now, if we apply these facts in the light of the evidence previously adduced in regard to the factors which determine the precipitation of uric acid in the urine, we arrive at the conclusion that the period when there is most risk of precipitation in the kidneys is during the time of sleep, and especially in the early morning during the two or three hours preceding breakfast. The deposition of uric acid is most imminent when there is a conjunction of the several conditions—that is to say, when the flow of urine is very scanty, when the secretion is hyperacid, and when it is rich in urates. Such a conjunction is most fully developed during the period of sleep. Sleep is a time of fasting, and therefore a time of hyperacidity of the urine—a time of recumbency and bodily immobility, and therefore a time when the renal stream approaches nearest to stagnation, and loiters longest about the purlieus of the kidneys. On the other hand, during the day and the waking hours the recurrence of the meals keeps the urine at a low degree of acidity, or even renders it for a time neutral or alkaline, the renal stream is comparatively full and rapid, and its descent from the kidneys is favoured by the force of gravity. During these hours, therefore, the risk of uric-acid precipitation is reduced to a minimum, even in persons who have a distinct tendency that way. For, as I have repeatedly had occasion to observe, the urine of calculous subjects exhibits precisely the same cyclical diurnal variations as that of healthy persons, though not always in so marked a degree.

A study of these facts indicates that if we safeguard the night the day may be generally left to take care of itself. This theoretical deduction is fully in accordance with experience in the treatment of uric-acid gravel. In the milder cases a single full dose of the alkalising agent taken at bedtime suffices to prevent the recurrence of the colicky pains and the discharge of uric-acid concretions. For this purpose the citrates and bicarbonates of potash and soda are the most effective. The citrate of potash is, perhaps, on the whole, the best preparation to employ; it has very little taste, and it sits comfortably on the stomach. The dose for an adult should not be less than forty to sixty grains, dissolved in three or four ounces of water. In severer cases a single dose is insufficient, and the early morning urine will still exhibit a morbid disposition to precipitate uric acid. In such cases a second but smaller dose should be taken about the middle period of the hours of sleep. This is less difficult to manage with the subjects of gravel than in healthy persons. There is commonly in calculous subjects a certain restlessness and a certain irritability of the urinary organs which leads to an increased frequency of micturition, and such persons rarely pass the night without a call to empty the bladder. Advantage should therefore be taken of this break in the continuity of sleep to take the second antacid dose. In this way the entire night and early morning may be effectually guarded.

Cases of uric-acid gravel, however, are not always to be got rid of on these easy terms. Now and then instances are met with in which the perversion is so great that the urine is disposed to deposit almost the day through and in which the normal alkaline tide after meals seems to be well-nigh abrogated. Under these circumstances, additional doses of the antacid are required to afford the requisite protection; and the right times for these doses are two or three hours after breakfast and two or three hours before dinner. But, so far as I have seen, these extreme conditions only last a short time—a few days at most—and there is then a return to a less urgent state of things. It is, indeed, a marked character of uric-acid gravel that it oscillates in intensity—it comes and goes in paroxysms—reminding one of the waviness of gouty phenomena. For this reason it is desirable to frequently note the state of the urine and to ascertain its greater or less proneness to deposit uric acid, so that the administration of the antacid may be adjusted to the actual needs of the patient. There is no great difficulty about this. If a freshly voided specimen of the urine of fasting—say the urine of the early morning or the urine secreted just before dinner—be set aside in a glass vessel in a warm place (so as to prevent the deposition of the amorphous urates) the imminence of precipitation can be easily observed. If precipitation be morbidly imminent crystals of uric acid will appear perhaps at once, perhaps in an hour or a couple of hours. If precipitation be not morbidly imminent crystals will not appear for several hours, perhaps not for two or three days. It is possible in this way to gauge pretty accurately the intensity of the morbid tendency, and to regulate thereby the amount and frequency of the antacid dose, or to decide on its discontinuance.

There are still some points in regard to the use of alkalies in gravel on which additional information is needed. We want to know more exactly the length of time over which a dose of alkali extends its influence on the urine, the amount of dose required to reach an effective result, and the relative alkalising value of the different preparations in use. Dr. Luff has, at my suggestion, undertaken an inquiry with a view of clearing up these points. His investigation is not yet complete, but he has already arrived at some results of interest, which he permits me to mention. He finds that a dose of forty grains of citrate of potash taken at 11 P.M extends its influence through the night and up to eight o'clock the next morning. The effect on the morning urine, however, was very slight. A dose of sixty grains had a more considerable effect, and often rendered the morning urine actually alkaline. Bicarbonate of potash acted in an exactly equivalent degree with the citrate. A corresponding dose of the acetate of potash appeared to act more rapidly, and its effect was less enduring than that of the citrate. The carbonates of lime and magnesia were found to be quite ineffective as alkalising agents on the urine.

A matter of some importance in the management of cases of uric-acid gravel is the *arrangement of meal times*. Each meal acts on the urine as a dose of alkali, and also as a diluent, and in both these ways operates as a protective against uric-acid precipitation. After the meal is absorbed and assimilated the urine becomes again increasingly acid and concentrated, and, as a consequence, increasingly prone to precipitate uric acid. Subjects of gravel should therefore be warned not to allow too long an interval to elapse between their meals. This precaution is especially needed as regards the interval between breakfast and the midday meal. The first meal of the day is with most persons very quickly

[4] A Contribution to Urology: Memoirs of the Literary and Philosophical Society of Manchester, vol. xv.

[5] On Some of the Daily Changes of the Urine: Edinburgh Medical Journal, 1860.

digested, and its effect on the urine correspondingly transient. At no time during the waking hours does the acidity of the urine tend to rise so high and the volume of the urine to fall so low as during the later portion of the interval between the first and second meal of the day. This interval should therefore be abridged. In this connexion the pleasant institution of afternoon tea may come in for a word of commendation, as serving to break the sometimes too long interval between luncheon and a late dinner. Some people interpose an unconscionable interval of twelve or fourteen hours between their last meal at night and their breakfast next morning. This is a very risky proceeding on the part of calculous subjects.

The essential thing in the prophylactic treatment of uric-acid gravel is to guard the urine from precipitating within the precincts of the kidney. And we shall practically have attained our object if we succeed not in altogether preventing precipitation, but in postponing it until the urine has quitted the kidneys. A postponement for a short time—even half an hour—may make all the difference between a precipitation which is fraught with pain and peril and a precipitation which is perfectly harmless. Now, the protective effect of an antacid dose extends a good deal beyond the point at which the urine is rendered actually alkaline. For, although all acid urines of medium density precipitate uric acid sooner or later, the time of the occurrence of that precipitation is immensely influenced by the degree of acidity of the urine. Other things being equal, the more acid the urine the earlier is the precipitation, and the less acid the urine the longer is the precipitation postponed. An antacid effect, therefore, which is too feeble to render the urine actually alkaline may be quite sufficient to depress its acidity to such a degree as shall postpone the time of precipitation until the urine has escaped from the kidneys and even from the bladder.

The use of mineral springs in the treatment of uric-acid gravel demands a word of comment. A sharp distinction must be drawn between alkaline springs and non-alkaline springs. Alkaline waters, such as those of Vichy, which are largely impregnated with carbonate of soda, have the power of alkalising the urine, and therefore absolutely protect against uric-acid gravel during the period of their use. But the non-alkaline waters have no such power, and their beneficial action is due to the fact that they greatly increase the flush of the urinary stream and thereby promote the carrying down of concretions already lodged in the precincts of the kidneys. Their efficacy in this direction is quite undoubted; but it is, I think, equally undoubted that the drinking of equivalent quantities of distilled water would be just as efficacious. A glance at the composition of the several non-alkaline springs which have acquired renown in the treatment of gravel supports this view and indicates that the neutral salts contained in them have little or nothing to do with their efficacy. Some of these waters are impregnated with sulphate or chloride of sodium; others with salts of magnesia; others, again, only contain minute quantities of sulphate of lime, and are scarcely distinguishable, except for their warm temperature, from ordinary drinking water. Yet all these most diverse springs claim equal powers in cases of gravel. Is it not plain that what alone gives them efficacy is that which they all contain in common—namely, their watery constituent? Subjects of urinary gravel who pay, as many of them do, an annual visit to one or other of these springs imagine that such a visit clears them from their calculous tendency for the rest of the year. This, I believe, is a delusion. Such persons, on their return home, stand, in regard to their morbid proclivity, precisely where they stood before their visit.

It is obvious that a preventive treatment of uric-acid gravel to be completely effective should be available all the year round, and be capable of timely application whenever the emergency arises. An adequate choice of substances which alkalise the urine is always at our disposal; their power of preventing uric-acid precipitation amounts to a chemical certainty; and in even moderately prudent hands no harm can follow from their use. I see no reason, provided vigilant watch be kept on the imminence of uric-acid precipitation in the fasting urine, in the manner before described, why sufferers from this kind of gravel should not, by a prompt resort to antacid remedies, be able at all times to protect themselves effectually against fresh formation of uric-acid concretions, and thereby save themselves from a world of pain and danger.

AN ABSTRACT OF

Lectures

ON THE

TREATMENT OF SURGICAL TUBERCULAR DISEASES.

Delivered at the Royal College of Surgeons of England, in June, 1892,

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LECTURE I.

THE question of the possibility and the mode of recovery from tuberculosis was considered in the first instance, and it was pointed out that in man there is a great tendency towards recovery. Mr. Cheyne then continued:

"Recovery may take place either after or before the formation of a communication with the exterior. Where a tubercular deposit has opened externally a considerable portion is evacuated, and when healing occurs only a fibrous induration, with sometimes a little caseous material in it, is left to mark the seat of the original disease. Where no communication has formed externally, the retrogressive changes are of various kinds, depending on the extent and character of the lesion, more especially on whether the tubercles are discrete or agglomerated into masses, or on whether caseation has occurred or not. Where the tubercles are discrete and not caseous at the time that the bacilli cease to act the probability is that the tubercle will disappear and leave practically no trace behind, the amount of resulting fibrous tissue being too small to be noticeable. How this takes place is not quite clear. In specimens from cases of synovial disease treated by tuberculin in which retrogression was occurring I found apparently two sets of changes. In the one the epithelioid cells of tubercle disappeared, their place being taken by smaller cells, which apparently developed into fibrous tissue (the most common appearance); in the other the epithelioid cells themselves became spindle-shaped and developed directly into fibrous tissue. Similar appearances may also be seen apart from the use of tuberculin, and under these circumstances a true cure results. Where the tubercular masses are larger or where caseation has occurred complete cure seldom occurs, though the disease may become quiescent. In that case a large amount of fibrous tissue is formed around the mass, and no doubt a good deal of the tubercular tissue disappears, or is converted into fibrous tissue or absorbed; but where the tubercular mass is large, remains of tubercles or portions of caseous material, often infiltrated with calcareous salts, are generally found towards the centre of the new fibrous tissue. Calcareous caseous masses are more common in these deposits than tissue showing a recognisable tubercular structure, and in both the presence of tubercle bacilli has been frequently demonstrated, both microscopically and by inoculation into animals. Hence we can only speak of cure in cases where the result of the healing process is fibroid induration with complete disappearance of the tubercular material. Encapsulation of a deposit is not true cure, but its occurrence, nevertheless, illustrates the fact that the bacillus often has a hard struggle for existence in the human body, and often fails to make headway or even to hold its ground. These changes have been most carefully studied in the lungs, and reference was made to various statistics as regards their frequency, especially those of Heitler, Fowler, Sidney Martin, Coats, and Harris. The relative frequency of complete fibroid change—i.e., cure—and of encapsulation of tubercular deposits is given by Martin as 1 to 4, and his percentage of true cures in post-mortem examinations of patients dying of non-tuberculous diseases is 2·7 per cent. It is not, however, certain that all of these fibroid indurations have resulted from tubercle.

"With regard to surgical tuberculoses, healing or encapsulation of tubercular deposits is not at all infrequent. In

should think that encapsulation of calcareo-caseous tubercular deposits occurs very frequently in glands, more often probably than anywhere else. In the case of tubercular glands, we frequently see that while some suppurate, others remain enlarged without suppurating, and as years pass gradually diminish in size; while we know, as the result of operations for the removal of tubercular glands, that these contain caseous material.

"As regards diseases of bones and joints, I should say that in the case of pure synovial disease we have in a good many cases a true recovery, though in others there often remains somewhere or other an encapsuled tubercular mass. Where recovery takes place at an early stage, while the tubercles are still discrete or only in small masses, it may be complete, and the amount of resulting fibrous tissue may be so small as not to interfere with the movement of the joint to any material extent. I have had two or three cases where expectant treatment was begun early and continued for a long time which have recovered completely as regards appearance and function, and with no apparent tendency to relapse. As a rule, however, the tubercular tissue is somewhere or other massed together, and in these cases there is always a considerable or even complete degree of stiffness left behind owing to the large amount of fibrous tissue formed; and not unfrequently, as I have said, there is encapsulation of tubercular material. In the case of deposits in the ends of bones encapsulation is the rule in the cases which recover without operation or abscess. In fact, although I have examined a considerable number of bones microscopically with old-standing quiescent tubercular deposits I have only once found appearances which justified the view that cure had really occurred; in all the other cases encapsulation and calcareous deposition had occurred, and the deposit remained as a constant source of danger. Where ankylosis has occurred in joints, although in the case of bony ankylosis I have seldom found distinct traces of tubercular tissue except where deposits were present, I have in most of the cases of fibrous ankylosis found remains of tubercular tissue somewhere or other. This is a point of great importance in connexion with the practical question of breaking down these joints with the view of obtaining better position or possibly movement. Experience has taught the great danger of such procedures, and the explanation is furnished by the fact which I have just stated."

The causes which oppose recovery were next considered under the heads of General and Local Causes. Among the general causes is the inheritance of a predisposition to tuberculosis either from the body being a better soil for the growth of the organism, or from the defensive arrangements of the body, the cells and fluids, being less efficient as antiparasitic and antitoxic agents. Reference was also made to the fact that the members of a tubercular family are in addition exposed to a much greater risk of infection and to a much larger dose of the virus from the dried secretions of the patient, in kissing, the use of the same food utensils, &c. A somewhat similar receptive condition of the body may be produced by confinement in close and badly ventilated localities, bad food, &c.; indeed, the predisposition of those already predisposed is often increased by the fact that if sickly they are kept in the house and taken care of to an unnecessary extent. The climate is also of importance, more especially if cold and damp, by setting up catarrhal inflammations of various mucous membranes, sore-throats, &c., thus causing local predisposition and opening up a point of entrance for the bacilli; and further, the same occurrences often lead to aggravation of the disease if it already exists. Such a climate may also lead to rheumatic affections which, especially when affecting joints, may again pass into tubercular disease. As regards food, of course if insufficient or poor in quality, the general nutrition of the patient is interfered with; and further, it is conceivable that too great consumption of certain substances may render the body a better soil. This view has been supported by Bidder as regards too much vegetable diet leading to an excess of potash in the tissues. Again, attacks of certain diseases, such as measles or scarlatina, predispose to tubercular infection, and also often aggravate an existing one. Even in the case of a mild disease like chicken-pox the lecturer had seen marked recrudescence of disease which had up to that time been improving.

"Of the local causes which interfere with the action of the tissues in repelling the parasite the most important are those which tend to set up and keep up a state of chronic inflammation in the part. I pointed out in my former lectures that the tubercular disease when spreading is always surrounded by a greater or less extent of tissue in a state of chronic inflammation, and that the disease tended to spread in the direction in which this tissue was greatest. Of the causes which increase the chronic inflammation, apart from the presence of the tubercle, movement of the affected parts and in the case of joints pressure of the joint surfaces against each other are the most important, and the improvement in the part when these two causes are removed is often very striking.

"Injury is also not only a potent factor in the production of these tubercular diseases, as I pointed out last year, but, as we all know, it is very apt to aggravate an existing lesion or to light up a disease which may have been quiescent for a long time. In the lighting up of a quiescent lesion the effect of the injury is either to rupture the fibrous capsule around the tubercular deposit, or, where this fibrous tissue is only small in amount, to lead to passage of fluid into the deposit, thus providing fresh pabulum for the growth of the bacilli. Its action in aggravating an existing disease may be partly due to the increase in the inflammation and partly to the accompanying swelling interfering with the lymph flow and producing a stasis of lymph in the part, a condition of matters which is favourable to the growth of the bacilli. Disturbances in the circulation of the blood must also be of importance; for example, where the disease affects the lower extremity, if the limb is allowed to hang, the free circulation of blood in the part and the removal of the waste products are interfered with, and, as we know, under such circumstances wounds do not heal, or only with great difficulty. Apart from these various factors on the part of the body, the conditions on the part of the tubercle bacillus itself may exercise a considerable influence on the spread of the disease; and although these conditions are not under the control of the surgeon, it is well to bear them in mind. I have formerly pointed out that the severity of an infective disease depends to a great extent on the initial dose, and this also holds good in tuberculosis. As cases of bone and joint disease no doubt arise not merely from individual bacilli carried to the part by the blood, but also, and, I think, most commonly, by actual emboli of tubercular material containing bacilli, and coming from some central focus, generally, I think, from the bronchial glands, the severity and acuteness of the disease will depend to some extent on the number of bacilli present in the original embolus. The virulence of these bacilli also varies to some extent, and it is found that if the virulence is diminished by artificial means these attenuated bacilli tend to set up local lesions resembling scrofulous diseases in man rather than the more acute general disease which is the usual result in the lower animals. On the other hand, it has been found that the virulence of certain organisms is increased by passage through highly susceptible animals, and it may be that in the case of tuberculosis in highly predisposed individuals the bacilli may gain in virulence, and thus the children, apart from their hereditary predisposition, are apt to get a more acute form of the disease as the result of the greater virulence of the bacilli and the large initial dose. Another thing which favours the growth of the tubercle bacilli is the concurrent growth of other organisms. In the case of the lung, the presence of other organisms, more especially of the micrococcus tetragenus, seems to have a great deal to do with the rapid breaking down of the tissue, and in open tubercular deposits elsewhere there is no doubt that the presence of the ordinary pyogenic organisms leads to extension and persistence of the disease to a very marked degree. This is a point to which I shall subsequently return."

Modes of combating tubercular disease.—Reference was in the first instance made to the question of prophylaxis, in so far as the other members of the household are concerned. This chiefly has reference to phthisis, but it also may be well to take some precautions where there are open wounds. The chief points in the prophylaxis are to disinfect the sputum, to prevent it from drying up, not to wipe the mouth with a handkerchief, no kissing, separate food utensils, disinfection of pillows, bed clothes, and sleeping room from time to time, &c. The treatment of the tubercular diseases must be considered under two separate headings—(1) Methods which aim at strengthening the body as

a whole or the affected part in particular, thus enabling the tissues to overcome the bacillus—methods, in fact, which do not act directly on the tubercular disease, but only indirectly through the tissues of the body; and (2) methods of which the essential feature is the removal or destruction of the tubercular tissue, and with it of the tubercular virus.

METHODS WHICH ACT ON THE BODY, AND NOT DIRECTLY ON THE TUBERCULAR DISEASE.

1. *General treatment.*—Allusion was first made to good hygiene and fresh air. In this connexion the question of climate naturally arises, and various points have to be considered in connexion with it. In the first place, the period of the disease at which the patient should be sent away. In surgical tuberculosis, in contrast to phthisis, a great deal can often be done by local treatment, operative or otherwise, and it is always a question whether the local or the climatic treatment is for the time being of most urgent importance. It is of course mainly in the early stage, while there is as yet no question of operative interference, that the change of climate is of greatest importance; or, again, after the necessary operative interference has been carried out. Where an operation is impending, or where such methods of treatment as extension are necessary, change of climate is for the time being inadvisable. The determination as to the place to which to send the patient will depend to a considerable extent on the view which one takes as to the action of climate in the treatment of tuberculosis. Two views are held with regard to this matter: the one that in the air of certain localities substances are present which possess an anti-tubercular action, and the other that the usefulness of climate depends on its effect in improving the general condition of the body, thus acting only secondarily on the tubercular disease. The first view is that which is generally held by the laity, more especially with regard to the seaside and sea voyages, and which is no doubt the mainspring of the remarkable pilgrimage to Margate, which seems to be the first and most essential part of the treatment in their minds—a pilgrimage undertaken without the slightest consideration as to whether that is the climate which suits the patient best or not. Indeed, the lecturer had known patients persist in staying at the east coast health resorts although they were never well there, on the idea that, though their bodily health was suffering, their tubercular disease was being cured by the specific substances—iodine, ozone, or what not—contained in the air. This is an erroneous and hurtful view, and the lecturer advocated the second view—viz., that the efficacy of climate depends solely on its action in re-establishing the vigour of the body, and enabling it to oppose successfully the tubercular invasion. From this point of view there is no one place which will suit all cases, and the decision must depend on a knowledge of the peculiarities of the patient and on the stage and situation of the disease. A point of great importance is to ascertain the temperature which suits the patient best, some preferring hot weather, others being well only in a cool place. The question of temperature must also be considered in connexion with the possibility of the patient taking active exercise in the open air. Where a patient is unable to walk the place chosen must be warm and dry, and it must also be sheltered from winds, because he ought to be out in the open air as much as possible. Many patients undoubtedly do best at the seaside, but there are others, and these by no means few, for whom high inland situations are the most suitable. In these cases it is best to send them to a cottage or farmhouse in a suitable inland place, such as Yorkshire in summer, or Devonshire in winter. Of seaside places, the South coast is probably the best in the early stage of the disease, and the east coast when convalescence is thoroughly established. The question of exercise is also important—the avoidance of pursuits which expose the patient to injury in an unusual degree, remembering the tendency of injury to lead to fresh outbreaks of the disease. Where the lower extremity is affected, it is best that the patient should be kept recumbent and not allowed to get about with crutches, as is so often done. He should be wheeled out into the open all day and exercise given him in the form of general massage. We know from the clinical history of ulcers and inflammations of the leg that the dependent position of the limb is a very great obstacle to healing, and the same must hold good with regard to a diseased joint, even though it be kept at absolute rest.

2. *Local treatment with the view of improving the resisting power of the tissues.*—One of the chief obstacles to recovery is the presence of chronic inflammation in the tissues around the tubercular area, which is kept up more especially by the various causes of unrest, such as movement or sepsis, and, in the case of joints, pressure of the diseased surfaces against each other. In combating this condition the first requisite is as far as possible to give absolute rest to the part—rest both from mechanical and chemical agencies, such as sepsis. Most surgeons are agreed as to the value of mechanical rest, but some, and notably Schede, do not share this view entirely. Schede thinks that too complete rest may do harm in joint cases, leading to atrophy of the capsule, diminution of synovial secretion, &c., and he allows his hip-joint cases to move and sit up in bed with an extension apparatus on. It is unnecessary to take up space in combating this view, but the value of rest in an organ, the urinary bladder, which is never at rest under ordinary circumstances, is indisputable. Quite recently Mr. Cheyne had had two cases of primary tuberculosis of the bladder, an exceedingly rare affection, which had been treated with great benefit by placing the organ completely at rest.

"CASE 1.—A man aged thirty-six had a week or two before consulting me in February, 1891, begun to suffer from frequency of micturition, accompanied by pain towards the end of the act. This had been getting worse for the last two days, and at the end of micturition pure blood was passed, with intense pain in the bladder and penis. The bladder was found to be very tender both above the pubis and per rectum. There was no tenderness or enlargement of the prostate or vesiculæ seminales; testicles normal; no kidney tenderness or swelling. Nothing felt on sounding, but the instrument caused great pain. Urine acid, containing blood and pus. Temperature 99°. The patient was pale and thin, and thought that he had been losing flesh lately. Some five or six years ago he had pleurisy, and at that time lost flesh greatly. No tubercular family history, but his only child has enlarged cervical glands, large tonsils, adenoids, &c. I sent him to bed and ordered the usual remedies for acute cystitis. For a few days he improved considerably, but about ten days later he had recurrence of the bleeding and strangury without any apparent cause. I watched him for about six weeks, during which time he had two attacks of pain and strangury and the prostate became somewhat larger than it was at first. By that time I had come to the conclusion that the case was one of tuberculosis of the bladder, although no other tubercular lesion could be detected; but before opening the bladder I had a consultation with an eminent man, who, having had large experience in the use of the cystoscope, examined him with that instrument at my request. He diagnosed a simple polypoid tumour close to the right ureteral orifice, and I believe a clay model was made of the tumour afterwards. Though I could not accept the diagnosis, it gave me the excuse for supra-pubic cystotomy, which I had been desirous to do. On opening the bladder above the pubis at the beginning of April I examined it most carefully, but there was no trace of a tumour. In the trigone, however, there were four or five spots about the size of peas, with slight ulceration on the surface, and in the surrounding mucous membrane a number of minute miliary tubercles could be readily seen. The spots were carefully scraped, iodoform powder rubbed in, and a drainage-tube inserted. For the first day or two he had a good deal of spasm of the bladder, but this soon passed off, and I kept up the drainage for six weeks. At the end of that time the tube was left out and the bladder closed during June, when he went to the seaside. He spent the summer lying in the open air, and he steadily gained in weight, but still passed pus in the urine. In September I allowed him to begin walking about, and since then he has steadily improved, though up to Christmas he had had two very slight attacks of pain and bleeding. Since Christmas he has had no further trouble, his urine has become free from pus, and he only passes urine about four times in twenty-four hours.

"CASE 2.—A man aged twenty-one, doubtful family history; uneasiness about bladder for more than a year; for last three months has had frequency of micturition; pain and blood on one or two occasions; losing flesh; other organs healthy; much pain towards end of micturition, which is fre-

quent; pus in urine; nodule felt in bladder wall just in front of right vesicula seminalis; very tender; no stone. Cystoscope showed ulcer in trigone; tubercle bacilli in urine. On Nov. 24th I performed supra-pubic cystotomy, found ulcer in trigone, and by exerting pressure on the nodule from rectum squeezed out a little curdy pus; ulcer scraped, bladder drained, albumoses from tuberculin injected; drainage continued for six months; now much improved, gained flesh, and lost old pain."

In the case of tubercular joint disease surgeons, with very few exceptions, are unanimous in recommending rest, and it is sometimes very striking how much improvement results, even in very bad cases, from absolute fixation of the affected joints. In many cases of joint disease, however, the unrest is not only due to movement, but also to a large extent to the tonic contraction of the muscles surrounding the diseased part, and causing pressure of the joint surfaces against each other. Where the bone has become affected, the joint is always found to be more or less completely fixed, the fixation being due in the early stage almost entirely to reflex contraction of the muscles surrounding it. The result is that the joint surfaces are kept constantly and firmly pressed against each other, and as a consequence the chronic inflammation in the bone is kept up, and rapid destruction of the part of the bone which is subject to the pressure takes place. This is seen in the hip-joint, for example, in the flattening of the upper surface of the head of the bone, and in the enlargement of the acetabulum in the upward and backward direction. This muscular contraction, especially in the early stage, may be looked on as symptomatic of bone disease; in pure synovial disease there may be marked thickening with comparatively little interference with movement within certain limits, certainly without complete rigidity. Hence, when the bone is inflamed mere rest of the joint as obtained by apparatus will not be sufficient; the muscles would still be able to contract and keep up the pressure and inflammation. It is therefore necessary in these cases to combine with the rest a moderate amount of extension sufficient to tire out the muscles and prevent this violent pressure of the joint surfaces against each other. Many surgeons object strongly to extension, under the impression that its object is to separate the joint surfaces from each other, and have pointed out that to effect this purpose very heavy weights must be employed, and that such weights would do injury to the joint by stretching the ligaments. All this is perfectly true; but separation of the joint surfaces ought not to be the object of the extension, and, even if it were readily possible, is not at all desirable. The object of extension is not to separate the joint surfaces, but to prevent them from being pressed together, two totally different things. Hence extension is chiefly of use in bone disease; where the case is one of pure synovial disease and where there is no marked rigidity of the muscles there is no object in applying extension unless deformity is present; indeed, it will probably do harm. And further, from this point of view it must be borne in mind that a weight which relieves the patient in the first instance may, if continued after the tonic contraction of the muscles has been overcome, cause a great deal of pain and mischief from stretching of the inflamed ligaments. To take a case under my care this winter: the patient, a man of about twenty-two years of age, was admitted with hip-joint disease of nine months' standing, complete rigidity and great pain, especially in the knee, and starting of the limb at night. The employment of a weight of 5 lb. along with a long splint at once relieved his pain. Thirteen days later he began to complain of pain about his hip joint, especially in front, and this was relieved by reducing the weight to 3 lb. Ten days later there was return of this pain, which at once disappeared on leaving off the extension and employing the long splint alone. In this case the muscular rigidity gave way more quickly than usual, and the fresh pain was the result of undue stretching of the inflamed capsule. It is therefore important in these cases to watch the extension and to diminish the weight as soon as it is evident that the muscular resistance has been overcome.

HOSPITAL FOR WEST FIFE.—It was resolved at a meeting at Dunfermline, held on the 15th inst., to erect an infectious diseases hospital at Milesmark, at a cost, with furnishings, of about £6000.

AN ABSTRACT OF
The Hunterian Lectures
ON
CERTAIN DISEASES OF THE BREAST.

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LECTURE II.

IN this lecture certain cystic diseases were first described, those occurring independently of any true tumour formation. Involution cysts are to be met with in the majority of fairly nourished women between fifty and sixty. They are small, not much exceeding a mustard seed, and contain a brown mucoid fluid. The question to solve is whether this change is a true atrophy or of inflammatory origin. Histologically there may be difficulty in deciding, but if the lesion is inflammatory, which seems unlikely, then inflammation must be almost universally distributed.

The following clinical forms of cysts are without doubt in relation with chronic interstitial mastitis:—

1. It is not by any means rare to have *small multiple cysts* distributed through the sclerosed tissue. In the softer forms of the diffuse disease they are very scanty, but in the firmer variety, where the breasts are typically cake-like and in the circumscribed lobular form, it is almost the rule to meet with them; they vary in size, but are yet so small as to give no marked nodulation over the surface of the breast. The signs associated clinically with chronic interstitial mastitis will be present. They are more numerous towards the periphery of the gland, and may be arranged in radiating lines from the nipple. The cysts contain fluid, the colour of which varies from yellow to a dirty brown, and in some cases there may be intra-cystic growths. Sir Astley Cooper's specimens in the College Museum (4744–4747) illustrate these cysts. (Fig. 1.) As to the age when they are found, this agrees

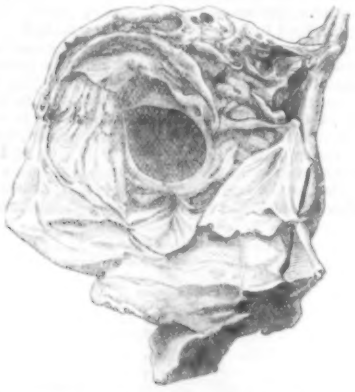
FIG. 1.

with that of chronic interstitial mastitis. Cases are not common under thirty-five, but in some instances these cysts may be met with in quite young women.[1] There is some difference of opinion as to the origin of these cysts. Gross states that both small ducts and acini give rise to them, but Broca says the acini alone. The former is undoubtedly correct, but it appears that probably the larger number arise from the small ducts. Age, however, is responsible for the relative proportion between the two, more cysts arising from the ducts in elderly subjects. The dilated ducts are usually lined by a single layer of a short columnar epithelium, the cell nuclei staining deeply, the dilated acini have a lining of flattened or sphenoidal cells, in some cases multiplying, which take the stain poorly. The cysts enlarge by the dilatation due to increased secretion, and also by the solution of the connective-tissue partitions between adjacent cysts.

[1] Robinson, Trans. Path. Soc., 1891.

2. The *single cyst* has been described under many names: "serous cyst," "lymphatic or muco-serous cyst" (Velpeau). It may be situated in any part of the breast, but is very rarely central, and may range in size from a small nut to an orange. If large there may be distinct prominence, and, perhaps, fluctuation, but when small and embedded in the breast substance, the cyst may give the impression of a solid tumour causing difficulty in diagnosis. This cyst is single in most cases in only a clinical sense, as we generally find small microscopical cysts in the tissue around, the latter being in a condition of sclerosis establishing its relation with chronic inflammatory change. Why one cyst should alone reach a large size is difficult to explain. Although the breast tissue shows the changes of chronic interstitial mastitis, it is remarkable that in a very small proportion of cases is there any thickening to be detected in the opposite breast. The cyst wall is smooth and shining without intra-cystic growths, and the fluid is clear and straw coloured. The cavity may consist of several loculi; between these septa project into the cavity. These features are well shown in Specimen 4752, Hunterian Museum, R.C.S., and in a case of Benjamin Travers (St. Thomas's Hospital, II. 7). (Fig. 2.) These cysts are rare under thirty-five, and more than half of the cases are in unmarried women; of those married many are sterile. The growth of the cyst is slow, very few cases giving a shorter history than six months. In 80 per cent. of cases the breast tissue outside the cyst gave distinct evidence of chronic interstitial

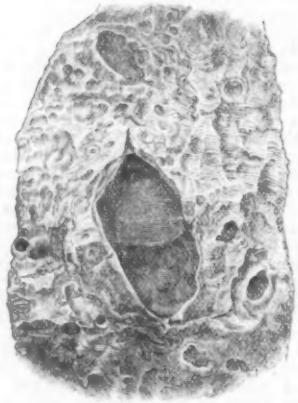
FIG. 2.



mastitis. The lining of the cyst is a cubical epithelium if small, and, if large, it may be flattened or absent. The diagnosis is very difficult in cases where the cyst is small, tense, and embedded in the breast. Its hardness may give the sensation of a solid tumour, especially a scirrhus, and, acting on such a supposition, amputation has in many cases been needlessly performed. In the following instance this was done after several surgeons had pronounced it an undoubted scirrhus:—A woman of forty had a very hard lump in the breast, with circumscribed outline and no fluctuation. The axillary glands were not enlarged, but the nipple was retracted. The tissue around was very indurated. After removal the tumour proved to be a very tense cyst about the size of a tangerine orange, with smooth walls and no intra-cystic growths. The surrounding tissue was white and fibrous with numerous small cysts in it. In treating these cases the moral is pointed that in any case of doubt aspiration should be first done. Should clear fluid be drawn off, the cyst may be laid open, wiped out with strong chloride of zinc solution and then allowed to heal up by granulation; or, what is better, it should be dissected out and the freshened surfaces brought in apposition by deep stitches; by this means recovery is undoubtedly accelerated.

3. *True cystic disease* is distinguished by the presence of multiple cysts varying in size. It has been described under many names. Sir A. Cooper,[2] speaking of "cellulous hydatids," says: "It is an enlargement growing for months or years, the swelling at first feeling solid, like simple chronic enlargement,' developing after a time fluctuating centres. These contain a mucilaginous serous fluid and the glands are not enlarged. On dissection the breast has chronic inflammation of the connective tissue with a large number of cysts of varying size distributed through it with tendency to grouping. The condition may be quite localised. Never seen the condition present in both breasts at the same time." Brodie[3] includes this and the "duct-cysts" under the term *sero-cystic disease*. Phocas,[4] as "maladie noueuse," has described nodular swellings of different sizes scattered through the breasts which he supposed from their hardness to be composed of fibrous tissue. He made no microscopical examination to ascertain the correctness of his conclusions and their fibrous nature was very doubtful. This disease is known in France as "maladie de Reclus,"[5] the latter considering that his cases were identical with those described by Phocas. These nodular swellings are usually situated more towards the periphery of the gland and König says especially on the posterior surface. (Fig. 3.) If small they are very hard, hence Phocas's conclusions; as they enlarge and if they come more to the surface fluctuation may be detected. They never attain a very large size, the average being about that of a walnut. Both breasts are as a rule involved, and the cysts develop progressively. The nodules are circumscribed, but the breast around is fibrous, and feels granular from the smaller cysts in it. They occur mostly between forty and fifty, and about half are found in single women. In only a small

FIG. 3.



proportion is pain complained of, but tenderness on pressure is more constant, and this is increased at the menstrual periods. There is no discharge from the nipple in over 80 per cent. of the cases; when this does occur it is usually clear, but rarely it may be blood-stained, due to some damage to the cyst wall or to the presence of intra-cystic growths. To meet with the latter in the larger cysts is unusual, in fourteen cases such a development being only met with once. The axillary glands are not enlarged. Histologically, as in chronic interstitial mastitis described before, the primary change is in the glandular structures, causing epithelial multiplication. This is attended by increased formation of connective tissue; but instead of the gland elements disappearing before this, we find that dilatation of both ducts and acini occurs, especially of the former. As the cysts increase in size, adjacent cysts become confluent by the solution of their party walls, their remains projecting into the cavity as septa. (Figs. 4 and 5.) The diagnosis must be made (*a*), if small, from fibrous nodules, Cruveilhier's fibrous bodies; (*b*) from carcinoma, with multiple spots of softening; (*c*) from duct-cysts.

The *duct cysts* have been so named by Birkett. Brodie and Reclus have included some cases in the descriptions of their diseases. Velpeau has a group, "muco-serous cysts," which are the exact analogues of Birkett's disease.

[2] Illustrations of Diseases of the Breast.

[3] Lectures on Surgery and Pathology.

[4] Thèse de Paris, 1881.

[5] Reclus: Revue de Chirurgie, Oct. 1883.

These cysts, which may be single or multiple, are situated centrally beneath the nipple, and they attain a much larger size than those in the preceding group. They arise beneath the areola by dilatation of the large ducts or sinuses, and are accompanied usually by nipple discharge. This is of a yellowish or brown colour, thin or gummy in consistency; often cholesterin is to be obtained from it. If the fluid is blood-stained it is an indication that probably a growth is developing inside

FIG. 4.

the cyst. The discharge may be the first symptom complained of, but soon the swelling beneath the areola appears, and then often the discharge stops. As the cyst enlarges the skin becomes thin and almost transparent, but is not adherent. One breast is alone affected, and the axillary glands are not enlarged. There may be tenderness on pressure, but pain is unusual. The cysts develop in the middle period of life, and the single and married are affected in about equal proportions. There is often

FIG. 5.

a history of menstrual irregularity, and in some cases a blow is stated to be the direct antecedent cause. The connective tissue may be sclerosed. On section, the cysts are globular, with thin walls, and lined by a single layer of short columnar epithelium; if multiple, they may be semilunar or flattened. The presence of these cysts in such a simple form is not at all a common occurrence. They are generally associated before long with the development of adenomatous growths, which we shall consider in the next lecture. The diagnosis has to be made from the true cystic disease. The latter is bilateral, with multiple cysts occurring with chronic interstitial mastitis, and with nipple discharge not a marked feature, whereas these duct cysts are unilateral, the cysts not invariably multiple, and nipple discharge almost a constant accompaniment.

The true *lymphatic or serous* cysts occupy a very doubtful position. For their development anywhere in the

FIG. 6.

body pressure seems a necessary factor; but here in the breast they do not solely develop in a part where such a cause may come into play. That they have a lining of flattened cells is quite true; but this is due to the pressure of the contained fluid, and not to their being endothelial, which would be the case if derived from connective tissue. In all the cases I have examined, the connective tissue showed distinct evidence of chronic interstitial mastitis, with small microscopic cysts. Now the latter are evidently

FIG. 7.

not derived from connective tissue, and I would hold that the same cause is in relation with the formation of the large cyst, and that the position of the true serous cyst is not proven.

The *blood cyst* has been described by many as a specific form. Its correct interpretation probably is that the blood is due to injury to an intra-cystic growth in a cyst, and that this soft growth becomes embedded in clot and so obscured.

In many sections from cases of chronic interstitial mastitis very marked changes in the epithelium lining the dilated ducts and acini may be noted. They are of importance pathologically from the fact that histologists are at variance as to their interpretation. This condition is on the border line between simple inflammatory and neoplastic formation, and from the point of view of prognosis it is desirable that we should have a fixed opinion one way or the other. We find that some of the cystic spaces, apparently derived from acini, are filled by a proliferating sphenoidal epithelium (Fig. 6), while others, which seem to be formed from ducts, have papillary vegetations which may fill up the cavity. (Fig. 7.) On these vegetations the columnar cells are arranged quite regularly, and the connective tissue does not show any signs of round-celled infiltration. Have we any reason to suppose or any evidence to offer that these changes are antecedent to carcinoma, either causally or as a stage in its development? We will, firstly, consider those cases of true cystic disease (maladie de Reclus) formed undoubtedly in relation with chronic interstitial mastitis, where at times these intra-cystic growths may be met with. French writers have particularly devoted themselves to the consideration of the subject. Brissaud and Malassez have called these changes intra-acinous cystic epitheliomas. Quénu describes them as an epithelial cirrhosis, and says it is a case of chronic interstitial mastitis, the lesions in the connective tissue being secondary to the irritation in the glandular part. Delbet[6] considers the changes are comparable to the contagious mammitis of cows and to the changes in psorospermosis as seen in the rabbit's liver. Both of these are due to irritants within the gland, the former to the streptococcus described by Nocard, and the latter to the psorospermiæ. Although no microbe has been isolated as a cause of this chronic mastitis, we might infer by analogy that one possibly exists, and that the changes it produces are only the analogues of those seen in psorospermosis, and that the epithelial overgrowth is no more malignant than in that disease. Billroth considers these epithelial changes undoubtedly benignant. At a meeting of the Anatomical Society of Paris in 1891 Pilliet brought up the subject, "whether this cystic disease of Reclus with growths, called intra-acinous cystic epithelioma, could behave like a malignant epithelioma and have secondary growths elsewhere." He brought forward two cases, but from their descriptions they seem to prove nothing. Many typical examples of cystic disease strongly suggest the evolution of carcinoma as a sequel, which fact may guide us in our prognosis and treatment. Valude quotes a case where a chronic mastitis was succeeded by secondary cancerous growths two years later. The following case was in St. Thomas's Hospital: "A woman, aged thirty-six, was admitted under Sir William Mac Cormac in 1887. Her mother died of carcinoma of the bowel. Five years before she had pain in both breasts, and two years later a lump was noticed in the left. This was treated by ointments, but did not disappear. A little later some circumscribed nodules were noticed in the right breast, but a few months after there was slight blood-stained discharge from the nipple, and the glands in the right axilla became enlarged. The nodules in the right breast became confluent, to form a hard nodulated mass, over which the skin was free and the nipple not retracted. She had lost flesh." If there is a relation between the cystic disease and carcinoma, how should this guide us with regard to treatment? Should there be any hesitation as to the nature of the nodules, then aspiration should be performed to ascertain their character. If they are proved cystic, how should we act? As the disease occurs in women towards the climacteric, where the breast is functionally inactive, and recognising that cancerous changes are not impossible in such a diseased organ, extirpation of the gland may be advocated, particularly where the cysts are multiple. This may be done without mutilation by leaving the skin and nipple. If one cyst has markedly enlarged, and the rest of the breast seems very little affected, we may temporise and employ local treatment, as incision; should growth be present in the cyst, the cyst must be removed, with a very wide margin. In cases of a doubtful nature, the surgeon is justified in removing the gland.

We now consider the relations of carcinoma to those cases of chronic interstitial mastitis where the connective-tissue changes are marked and the cysts only small and pea-like. That the two are often in association is a well-known fact. In many carcinomatous growths we get evidence at the margin of chronic inflammatory change, and the latter is possibly a stage in the evolution of the carcinoma. Raymond Johnson and Beadles at the Pathological Society in April last read papers on these changes, and were inclined to think that carcinoma has a distinct relation to chronic interstitial mastitis. This view has its strenuous opponents, who urge that such a condition is only an accidental association of two pathological lesions, and that there is no causal relation between the two. However, the greater the number of examples, the stronger the evidence in its favour, and I must own that previous mastitis seems to have some very definite relation to the subsequent carcinoma. Two rare cases of scirrhus have come under my notice, which form strong links in the chain, where scirrhous nodules were disseminated in breasts, showing the most marked signs of chronic interstitial mastitis. If we allow, then, that this chronic inflammatory change has some relation to the subsequent neoplasm, what bearing has this on prognosis and treatment? We must remember that in giving a prognosis other factors, as age and hereditary tendency, have to be reckoned with. After observing many cases of chronic interstitial mastitis, we see that the majority often remain stationary. With this knowledge the most advanced surgeon could not press strongly the claims for a more frequent removal; but, at the same time, with this knowledge certainly we are more on our guard, and any marked development of pain or increasing thickening or skin adhesion may be signs warning us that the time for hesitation is past and action must be taken.

[6] Duplay et Reclus: Traité de Chirurgie, tome vi.

ARTERIAL HIGH TENSION.[1]

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ARTERIAL high tension may be divided into three kinds: cardiac, degenerative, and vaso-motor. Cardiac high tension is that variety which results from an abnormal contracting force in the left ventricle, either owing to some temporary disturbance—as excitement, exertion; or to some permanent cardiac defect, which prevents this force being used so economically as usual—as in aortic regurgitation. Degenerative high tension is that resulting from a degeneration of the arteries, which makes their walls thicker and more rigid; therefore it requires greater force to drive the normal amount of blood through them than would be the case with healthy vessels having normally expansile walls. Vaso-motor high tension is brought about by increase in the contracting force of the peripheral arterioles, which thus, as in the degenerative form, necessitates more propelling power to pass a given quantity of blood through them than would be required by normally contracting vessels. It is evident that there is one condition necessary for the production of any form of high tension: there must be extra contracting force put forth by the left ventricle. Now, excessive use of any portion of the body is to be avoided; more especially of such an organ as the heart, which knows no rest. In so far, therefore, high tension is always objectionable, and unless there are counter-balancing reasons of great moment, it should be our endeavour always to do away with it. Speaking generally, there *are* such reasons in the forms I have called cardiac and degenerative, but not in the vaso-motor variety. In aortic regurgitation, which we may take as the type of the cardiac form, some of the blood forced into the aorta flows back into the ventricle; if, then, say, three ounces be the amount the individual requires to be sent into his arterial system at each heart stroke, when regurgitation exists a larger amount—say, four ounces—will have to be similarly propelled to allow of the reflux into the ventricle of one ounce. Four ounces will distend the aorta more than three, and the more an elastic tube is distended the greater is the tension of its walls—that is, the tension in the aorta will be increased, and therefore there will be high tension throughout the arterial system. But as there is no excess of resistance this

[1] A paper read before the Birmingham and Midland Branch of the British Medical Association, March, 1892.

high tension will force the blood through the arteries at a greater rate, so that the increase in fulness of the arteries will be of shorter duration than normal—that is, the pulse wave will be short, and the period of emptiness between the waves will be long. This is why the aortic regurgitant pulse is called the pulse of unfilled arteries—a condition due to the force of the heart being greater than is required by the peripheral resistance. So that, apart from the regurgitation of blood, the aortic pulse would still be one of high tension of short duration, followed by an unusually long period of very low tension in the arteries, the reflux of blood merely intensifying this latter condition. The high tension which occurs with the increased cardiac action during muscular exertion is of the same nature; but here the period of low tension—that is, the collapse of the pulse—is not so marked, as there is no reflux of blood into the ventricle. In the healthy subject this form of high tension is very transient, as nature quickly provides a corrective by making the peripheral resistance subnormal and so allowing the same cardiac force to keep up a more rapid circulation. Similar to this is the high tension due to palpitation, but the condition is a more serious one, and its mode of ending uncertain. We are dealing with a pathological state, and not a physiological one, as in the high tension of exercise. It is unlikely that the peripheral system will accommodate itself to the new condition and diminish its resistance: very probably the same causes which induced the palpitation will also have increased the peripheral resistance. Hence the heart fails to empty itself during its shortened systole against the increased pressure, and dyspnœa, oppression, or even faintness follows.

It is given to but few mortals to die altogether—from a universal failure of function. Unfortunately for man, as a chain's strength is that of its weakest link, so is the strength of his life dependent upon his weakest function. Death comes to most men through the failure of one function. To some it happens, either through inheritance or the character of the life led, that the arterial system is the first to decay; arteries thicken with the rigidity of fibrous tissue or calcareous deposit and their gentle, ever-varying elasticity is a thing of the past. The heart has to force the blood through a system of comparatively unyielding tubes and we know that this requires greater exertion. Hence, with too quickly decaying arteries the blood tension must be increased if a normal circulation is to be maintained. Health in its true sense is out of the question; at best there is but a pathological equilibrium. One of the hardest things a physician can have to determine is what tension is requisite for this. If he allow it to remain too high, cerebral hæmorrhage stares him in the face; while if it remain too low, then symmetrical gangrene, benumbed extremities, and all the woes of vascular debility make wretched the life of the patient. The character of this degenerative tension differs greatly from that which is primarily due to cardiac action. It is no question of forcing a larger amount of blood through pleasantly accommodating tubes, but one of pressing the same amount through tubes which will not enlarge. This necessitates that the tension throughout the *whole* of the period occupied by the passage of blood must be increased. There will be no period of subnormal or even normal tension. Moreover, as the system is rigid, the increase of tension conveyed by the ventricle to the aorta will be felt almost simultaneously throughout the system; hence the onset of tension will be sudden, as in the high tension due to cardiac action.

In high tension due to increased contraction of the arterioles while their elasticity remains normal, we again find the need to force a normal amount of blood through abnormally small tubes. The tension wave will thus, as in the degenerative form, be a long one, persisting through the whole of the diastole; but, as the tubes are not rigid, its onset will not be sudden. This increased contraction of the arterioles arises from undue excitement of the vaso-motor centre owing to some morbid element in the blood circulating through the medulla. This morbid element may have a very transient existence, or may continuously act for several days, as is exemplified in the varying duration of megrim from a mere headache of an hour to an utterly prostrating bilious attack of a week. It may frequently recur throughout life, as in chronic renal disease, and so lead to the deposit of fibrous tissue in the arterial coat with its consequent thickening; but even in chronic renal disease it is never always present. The tension may be constantly high, it is true, but this will be owing to the vascular degeneration; and however high this mean tension may be, there will be exacerbations of it when impure blood excites unduly the vaso-motor centre, just as megrim causes exacerbation of the normal tension; and, unfortunately, there will be depressions of it below this mean whenever the heart flags and fails to be equal to its perennial increase of toil, as nearly always happens in the later stages of renal cirrhosis.

From what has been stated it is manifest that the treatment of high tension is not always one and the same. Sometimes it is to be left as it is, sometimes it should be encouraged, and, perhaps oftenest, it is to be diminished. I say perhaps oftenest, not because it is necessarily this form which exists most commonly, but because it is the one which most frequently produces symptoms, and therefore is the one for which our aid will be oftenest sought. That we should most carefully differentiate these varieties need not be insisted upon, for the treatment required for one patient may be of an exactly opposite character to that required for another. The three forms I have described may be separated from one another by examination of the pulse. The pulse of cardiac high tension is felt beneath the finger as a wave of great size, but very short duration. It comes suddenly, strikes forcibly, and vanishes as quickly, leaving apparently nothing behind it to mark its passage. The wave of the degenerative pulse comes almost as suddenly, but is much smaller, and is so loth to go that much seems still to remain, even up to the time when its successor takes its place. The wave of vaso-motor high tension feels smaller than either of the others, and, unlike them, comes laboriously and slow. Its duration is long, but it appears to have vanished, or nearly so, before its successor arrives. So long as only one of these forms exists and remains quite distinct its diagnosis is easy; but generally two, or even the three, are all acting as components in the resultant high tension. Then the apportioning its correct value to each component is often a most delicate and difficult task, but one which it is of great importance to accurately perform. I always set about it in this way. First, I attend only to the shock of the impulse: is it large, small; compressible, incompressible; sudden, or slow-coming? This will tell me the condition of the cardiac action. Next, I feel for the state of the pulse after this shock is over: does it remain full or nearly so, or empty slowly, or vanish quickly? Does the tube feel large or small, compressible or incompressible? and so I learn whether the peripheral resistance, the vaso-motor contraction, is great or slight. Finally, I shut off the cardiac impulse with the other hand, and still feel for the comparatively empty vessel. Can it be felt, and if so how plainly? Is it nearly as evident as before, rounded and firm, or are its walls soft and flaccid? If it stand out firmly, does it feel tough, like a round leather bootlace, or ribbed, like whipcord? Then, having made these three distinct observations, I compare them together, and estimate how far one should correct the conclusion drawn from another. For instance, if I find the vessel is degenerated, then the incompressibility and suddenness of the impulse will have their significance lessened; and its smallness, if such exist, need not mean that the ventricle is acting feebly. Again, should the impulse be slow in coming and small, a sluggish and feeble circulation is indicated if the tension be normal or subnormal; but should this be high, then this slowness of onset is owing to the extra fight the heart has to make against the tightly distended aorta, and the length of its duration will make up for its smallness.

What I have more to say will be told best in connexion with some illustrative cases, to the relation of which I will now address myself.

A widow aged fifty-seven, of apparently robust physique, came to my out-patient clinic at the Queen's Hospital last October complaining of a stiff neck, an indefinite but painful swelling below the left ear, cramps in the calves, sleep disturbed, flatulence, alternate shiverings and flushings. Her tongue was thinly coated with a white fur, but her bowels were regular. Her aortic second sound was much accented, the tension in her radial was high, and the impulse was forcible. All her symptoms were no doubt due to a gastro-intestinal catarrh probably resulting from a chill, which, interfering with assimilation, had allowed morbid elements to circulate in the blood, some of which had irritated the vaso-motor centre, and so produced high tension. Here was a simple, uncomplicated case

of vaso-motor high tension, and treatment must be directed to the removal of the morbidity in the blood which had induced this. We must be careful not to look upon the high tension itself as the evil; it is, as we know, a preservative measure, to protect the tissues from the impure blood. But we naturally conclude that if we lower the tension we shall have removed the impurities in the blood which raised it. It is true that the malassimilation of gastric catarrh may have produced impurities other than those which raise tension; but they all appeared together, and we act in the hope that the drug which is capable of removing some will be efficacious in eliminating all. Now mercury, especially as the subchloride, is the drug *par excellence* for correcting high tension due to digestive derangement. It does not do this by virtue of its aperient action, for it is a slow acting aperient, while a single dose will often do away with high tension within two hours. Moreover, a small amount—a quarter of a grain—may be quite sufficient to lower tension, though entirely inadequate to open the bowels. I therefore gave this woman an eighth of a grain of calomel twice a day. She came to me again in a week with all her symptoms gone, or nearly so; practically well. Her tongue was clean and moist and the tension in her radial decidedly less, her pulse being correspondingly shorter and more sudden.

Mr. ——, aged fifty, a well-to-do tradesman, came to me in February, 1887, complaining of sleeplessness, from which he had suffered for three years—ever since he had lost his partner in the business; also of dyspnœa on even slight exertion, of occasional giddiness and swooning, and of much diffidence and depression. His history was very good, except that he had had two very slight rheumatic attacks, lasting two or three days each, four years ago, and that from a child he was always nervous, the least unusual thing making him turn pale—i.e., his cardiac government was unstable. His heart I found increased in size, with a diffused pulsation in the fifth and sixth spaces near the sternum. The sounds were slapping in character and the second aortic was unduly accented. His arteries were thickened and his pulse was 80; irregular, sudden, and incompressible. Here the condition was a complicated one. He had degenerated vessels. These I could not alter. His tension was high, but whether too high, considering the difficulty there must be in passing a due amount of blood through his diseased vessels, I could not determine at a first visit. But there was one condition I knew wanted something done for it; his heart was failing. With high tension his pulse should have been slow, but it beat 80 times in the minute; moreover, it was irregular both in size and rhythm; his heart was increased in size, and this increase was probably due to dilatation, as the sounds were not those of hypertrophy, and there was a diffused impulse over the right ventricle. I therefore prescribed the following heart tonic three times a day:—one drachm of the infusion of digitalis, one grain of nitrite of sodium, five minims of liquor strychniæ, five grains of bicarbonate of soda, compound gentian infusion to one ounce. I added the nitrite of sodium to counteract the action of the digitalis in raising vaso-motor tension, as I was not certain that this might not already be too high. I also gave him a drachm of paraldehyde to take at night should sleep refuse to come to him. He came again in a fortnight feeling much better, with a franker, brighter expression. His pulse was 67, not incompressible, of fair size and regular, except that it had eight intermissions in the minute, which were represented by abortive heart beats. The heart sounds were no longer slapping, but the second aortic was still increased. During eleven of the fourteen nights he had slept six hours without the paraldehyde, and on the other three he had slept four hours with it. He was ordered to continue the same treatment with the exception of the digitalis, which I withdrew, thinking it might account for the intermissions. Fourteen days later I saw him once more. His expression was now quite frank and open. His face had filled out, and his complexion become ruddy. He felt quite equal to his work, and took pleasure in it. He had had six hours' sleep on twelve of the nights. His aortic second sound was no longer increased; the pulse was 80, with four intermissions; but the abortive heart-beats corresponding to these were stronger than formerly. I was rather surprised at this result; with his thickened arteries I should have expected his machinery to work best with a tension above normal, but it is evident that a normal tension was most suited to him. Still this normal tension could not have allowed him to have a normal circulation; this must have been an enfeebled one and, consequently, he could never be equal to the work his constitution might have performed if there had been no thickened vessels, nor to that work he might have done if his heart had been strong enough to cope with thickened vessels. What happened was this: he found his circulation was most active when his tension was normal; if it rose above normal his heart failed, and if it became subnormal the thickened vessels too greatly cut off the supply.

It is in such cases as these that the medical attendant who has experience of his patient has such an immense advantage over the chance consultant. If I see this man again, I shall bear in mind that he works most easily with a tension which is the normal tension of the healthy individual.

Mr. ——, aged thirty-six, consulted me in May of last year, complaining of a chronic cough, with thick mucoid expectoration and attacks of præcordial oppression and faintness. Three years ago he had congestion of the lungs and, a week before I saw him, spat up a teaspoonful of bright blood just after he had assisted in getting a boat over a weir. There was a little crepitation at the base of the right lung, but no sign of phthisis. His heart's apex beat in the sixth space and left nipple line; the area of dulness being otherwise normal. The impulse was excited, but the first sound was fairly long and firm. His radial was thickened. Whilst he was standing up for me to examine his chest he was seized with one of these attacks of oppression, his heart's action becoming slow and laboured. He was quite calm, refused any stimulant, but said he must lie down on the floor and then the attack would soon pass off. He did so, and I kept my fingers on his pulse and my stethoscope on his heart. I noted that as the symptoms passed away the heart beat more quickly and with less strenuousness, while the pulse became full and soft. He told me that though he occasionally got palpitation on exertion, yet by far its more frequent cause was digestion. And so it seemed; for I told him at once to go and do what business he had in the City and then return to me. In about an hour he came back. He had been bustling about, and walking quickly, yet his heart was acting much better than when he left me. This then was an instance where impure blood raised the peripheral resistance to such a degree that his somewhat feeble heart was unable to cope with it. This is a condition very common amongst sedentary folk and brain workers. Their vascular nerves become very sensitive, whilst their heart muscle is not of the strongest. As a result, reflex action is too easily excited and the heart is too easily upset by the shock thus created. Especially are those people liable whose vessels are unduly rigid and who therefore already give their heart excessive work to do; in such subjects a small increase in the vaso-motor contraction may produce a result as great as a far larger increase in a subject with normal vessels. But to return to my patient. My prescription was: 1st. To lead an even, quiet life, with as much fresh air as possible, but no severe exercise of any kind. 2nd. Rhubarb powder, bicarbonate of soda, ginger powder, two grains of each; to be taken daily before dinner. 3rd. A quarter of a grain of subchloride of mercury to be taken twice or thrice a day during the dyspeptic attacks. 4th. Powdered Carlsbad Sprudel salt, a drachm to be taken before breakfast in hot water when required, and a tumblerful of hot water to be taken regularly night and morning. 5th. Five grains of antipyrin every half hour for three doses during the attacks of palpitation. He lived some distance off, and I did not see him again, but he kindly wrote, in answer to my inquiry, that he had received considerable benefit from the treatment, except from the antipyrin, a second dose of which several times made him feel faint. This action of antipyrin is, I think, a thing to be mindful of. It is a drug we should very charily prescribe in high tension (megrim, for example), unless we are sure of the heart's stability. I believe that its depressing effect on the heart occurs sooner than its action on the vaso-motor centre. But in every case where we use antipyrin we must remember it merely removes an effect, it does not touch the cause. Its action in depressing the vaso-motor centre is stronger than that of the impure blood in stimulating this centre. Another drug, such as calomel or rhubarb, which will prevent the formation of the impurity, must be given as well.

The effect of high tension upon sleep is a very important one; it is also a complex one, acting in different ways.

Mr. ——, aged fifty-six, suffering from syphilitic

phthisis of long duration, was sent to me on account of persistent insomnia, from which he had suffered for nine months, ever since the death of his wife. He told me that his average amount of sleep was less rather than above two hours, that during the rest of the night his brain was incoherently, yet pertinaciously active, and he spent the dark hours in tossing restlessly to and fro. But in the day things were very different with him; he was ever languid and drowsy, often dropping to sleep in his chair, and incapable of applying himself to business. His heart's apex was ill felt in the nipple line and sixth space; its dulness reached up to the third cartilage, and the second aortic sound was strongly accented. His pulse was 64, and though it appeared of fair size this was no doubt owing in a great measure to the thickened vessel, as the tension was very high. The urine was uratic. The explanation was simple. His grief had depressed his vital powers, including his digestive functions; malassimilation and high tension resulted. During the day his feeble heart was unable sufficiently to cope with this; on account of gravity the brain was the first to suffer from the consequent anæmia; hence the drowsiness &c. by day. But at night things were quite different: the heart had no longer to pump blood up to the brain or bring it up from the dependent legs, nor had it to spend its strength in exercise and the processes of digestion; the impurity of the blood would also lessen every hour since the last ingestion of food; hence the tension would relax. The brain would now be on a level with the rest of the body and hence gravity would no longer injuriously affect it. For all these reasons its blood supply would be much greater than by day, and hence sleeplessness. He had taken in vain many soporifics, including opium, with no good result. He was already on a tonic regimen, so I merely prescribed a quarter of a grain of calomel to be taken three times a day in addition. In a week he came again. He had slept from eleven to four every night, and on two nights had dozed after four. His urine was clear, his pulse 68, and its tension very slightly above normal.

Sudden exposure to cold often seriously embarrasses the heart by the superficial high tension it causes. To come out of a warm house on a frosty morning and run to catch a train is more likely to produce palpitation and breathlessness than the same proceeding on a warm day in summer. A fruiterer's assistant, with a double aortic murmur and a dilated aorta, came to me at the Queen's Hospital complaining of anginous attacks, which he said often occurred on his leaving breakfast to come out into the cold of the open shop to serve a customer, or when he drove out in his cart, if the wind blew coldly against him at starting. I gave him strychnia to strengthen his much broken-down heart, hydrochloric acid and hop to improve his digestion and soothe his nerves, with glonoin to take when his attacks came on. These attacks he had been having two or three times daily, and each lasted over an hour. During the next three months he only had four; and at the end of this time, though it was midwinter, he found himself able to face the cold with impunity. The great relief he got from the glonoin when he used it during the attacks showed that they were due to the injurious effect of suddenly occurring high tension upon an enfeebled heart; but when this organ was strengthened by the tonic regimen it was able to cope satisfactorily with this.

High tension may produce general œdema if the heart be weak.

J. R——, thirty-three, was admitted into the Queen's Hospital, under my care, on March 19th, 1891, on account of orthopnœa and dropsy. He had double aortic disease; his heart was acting in a banging, troubled manner, though regular; its apex beat one inch without the left nipple line in the sixth space, and dulness reached up to the second cartilage, though it was not increased to the right. His pulse was 100, collapsing; there was considerable tension between the impulses. Urine a cloud of albumen, but urea 2 to 2·8 per cent. On the 19th, the day of admission, he was given the following mixture three times a day: three minims of the tincture of strophanthus, one drachm of the spirit of nitrous ether, to one ounce of camphor water. On the 21st, when I first saw him, a grain of sodium nitrite was added to this, and he was also given a third of a grain of calomel every two hours; and on the 23rd the calomel was reduced to three doses a day. The effect on the urine, dropsy, and heart was remarkable. The urine passed during the first twenty-four hours after admission was 16 oz.; on the 21st—i.e., the day the calomel was first given—the amount was only 22 oz; but, on the succeeding days, 108, 118, 119, 97, 96, 64, 54 oz. respectively. On April 1st the œdema was quite gone, and also the dyspnœa. The pulse was much more collapsing, though less forcible, the tension between the impulses being subnormal, and the heart was acting with comparative quiet, and comfortably. I think this result is instructive, for we usually raise tension to get rid of œdema. I should have done so in this case had it not been already high, and I feared the dangers of a too excessive tension on the damaged heart. I thought the heart was working up to its limit, and that any increase in tension would only weaken it and still further depress the circulation.

Many people complain of breathlessness after meals. This is usually put down to mechanical causes, such as flatulence, or a full stomach pressing up the diaphragm. But often there is no flatulence, or evidence of overladen stomach; the subjects of it are not seldom most careful in their dietary. In several instances I have found it to be due to high tension, resulting, no doubt, from imperfect metabolism. Often, I expect, when flatulence *does* exist, high tension also plays an important part.

Grief kills; but so, they say, does sudden joy. Joy quickens and stimulates cardiac action. "My heart leaps up when I behold a rainbow in the sky," sang Wordsworth. But suppose there is no field on which this joyful heart can display itself; suppose the blood canals are blocked with high tension! What then? The bounding heart is unable to suffuse with joy the peripheries of the body; its glowing warmth recoils discomfited upon itself. It cannot leap up. A great nervous revulsion occurs, and death comes. This is how it is that to some a great joy brings a ruddy glow and a feeling of the fulness of life, but to others death-like pallor and a sense of dread oppression.

Birmingham.

ON THE ADVISABILITY OF ADOPTING THE TERM "TROPICAL MEASLES."[1]

BY JAMES CANTLIE, M.B. ABERD., F.R.C.S. ENG.

A DISEASE of an unclassed type was prevalent amongst the foreign residents of Hong Kong during the months of September and October, 1888. Practitioners baptised the mild cases as a form of "German measles," and the severe cases as a form of "dengue." It is my intention to show that we are dealing with a distinct disease—neither German measles nor dengue fever, a disease running a distinct and definite course and presenting varieties of severity usual in all epidemic forms of illness. It is a tradition, built no doubt on sufficient experience, that measles in the tropics is a very slight ailment, and mothers of families rather welcome the disease before they take their children to Europe to be exposed to the more serious form met with there. Up to date it has been usual to call most cases met with "German measles," but on talking with my fellow practitioners they invariably say it is "what is called German measles," or "we call it German measles." The uncertainty of ascribing a definite name to the disease is extremely unsatisfactory, and implies a confession of ignorance to the laity which, although no doubt scientifically honest, is practically useless. The past history shows also an uncertainty in the minds of many, mild cases of the disease being stamped as a variety of German measles, severe cases being assigned to the category of "dengue." No one seems to have been bold enough to ascribe a separate designation to the disease, although all are convinced that it is not typical in any one instance of either its name or ancestry. In the present epidemic the same doubt holds good, as out of the few practitioners in the colony some designate certain of the cases "dengue," others "German measles," and others "a variety of German measles," and the opinion of any one man varies according to the case in hand. My purpose is to show that we are dealing with a separate disease, possibly a separate genus, but certainly a distinct species. The upholders of the theory that the disease is a variety

[1] Read before the Medical Society of Hong Kong.

of German measles state that there are exceptional cases in which the disease assumes a more virulent type and exceeds the limit of feverishness met with in German measles. They uphold their belief by quoting instances of variety in measles as met with in Europe, and also in scarlet fever. All the variations quoted, however, of, say, scarlet fever, point to variations in which a community of symptoms holds good: stating how that in scarlet fever epidemics some escape with a slight sore-throat, a coryza, feverishness without a rash, and so on, just as in the disease in question some escape with mere febrile disturbance without a rash, and so on. To these it is answered that the quotations are variations of a recognised type of a more severe trouble, a stereotyped disease which during its prevalence has mild expositions; but the disease is named not from its mild varieties, but from its typical course, its signs and symptoms as met with in the form we know. In the same way there are in the disease in question, as in all diseases, however typical, varieties of severity; but it is the cases that run a typical course, not the mild varieties, that establish the character of the ailment. It is arguing in the wrong direction to take a few mild types as *the* disease, and to regard the majority, although pursuing a definite course, and those behaving in a consistent fashion, as a mere freak. There is no doubt that the account of the disease reads, to begin, very like German measles; but many ailments read alike to begin with. It will be seen that the history of tropical measles is quite peculiar after the third day, and it would be more in keeping with logical form to regard German measles as a variety of tropical measles than *vice versâ*. With no wish to dethrone German measles, it is but continuing in darkness to allow the present vagueness to remain tacked on to a disease which seems to belong to a perfectly distinct species. During the months of September and October, 1888, the disease had been talked about very freely, owing to the fact of so many adults suffering from the complaint; and we have been able to observe more closely the exact course of the disease because of the fact that adults chiefly, and not children only, have been attacked.

Definition.—Rubeola tropica is a specific eruptive fever, the primary rose-red rash appearing on the face and neck on the second day of the illness; the second rash, miliary and papular, on the body, face, and occasionally on the limbs, on the fourth day. The third rash—of small, coalescent wheals—appears on the arms and legs, or legs only, on the sixth day, when the fever subsides. The more severe form of the disease chiefly attacks adults. It is epidemic, contagious, but seldom associated with catarrh or desquamation, and characterised by the intensity of the pains in the back, head and orbit, on the third and fourth days of the illness.

Exposure.—The period of exposure, as is usual with all zymotic diseases, cannot be definitely ascertained. In the majority, however, a distinct history of infection by contagion can be made out. In no case have I ascertained that the disease is communicable by a third person.

Incubation.—The period of incubation is, in ascertained cases, under seven days. This statement is made from carefully inquiring into many cases, the most distinct being that of a man who came to the colony from Australia, and who, on the seventh day after his arrival, developed the disease. How long, of course, he had been in the colony before exposure I could not find out, but from my inquiries into other cases it would appear as if six days were the extent of the period of incubation. Therefore, I conclude he had been not more than twenty-hours in the colony before exposure. Six days I would affirm to be the period of incubation.

The period of incubation passes with a growing feeling of discomfort and lassitude, loss of appetite and sleeplessness, until towards the sixth day, when the patient, unable to understand his condition, seeks advice as regards his illness. When seen on the sixth day the patient is pale, with a muddy complexion, headache affecting a line drawn across from one temple to the other, along the junction of the vault with the forehead; backache extending from the loins up between the shoulders. Tongue lightly coated, no hypertrophy of papillæ, no coryza, although very occasionally sneezing has been recorded. Pulse accelerated to 90 or 100; temperature 99·4°, one degree above the normal. The impression left on the doctor is that the patient is "in for something," and that that something is not ordinary fever; by that I mean any of the climatic fevers we are accustomed to in this colony (the tropics).

Invasion.—The temperature rises on the evening of the sixth day of incubation, and after a restless night the patient when seen next morning—i.e., second day of invasion—presents the following symptoms: headache and backache severe, intense pains at the back of the orbits. The face is red, amounting almost to rosy redness, the redness extending downwards over the sides of the neck, until, becoming more diffuse, it assumes a mottled appearance. The skin of the body and limbs feels hot and dry, and is injected to the extent that the impression of the fingers can be seen for a few seconds after pressure. The tongue is dry, but normal in colour and coating; the slight fur of the previous day has disappeared. At times, however, in very severe forms of the complaint, the tongue remains coated with a fine thick fur for days. Average temperature 102·5°; highest observed 103·4°. Pulse excited, 100 to 110. The patient feels very ill even when the temperature is as low as 101°, altogether out of proportion to the feverishness. Vomiting is present in one-seventh, and diarrhœa in one-tenth, of the cases observed. Nothing is more marked at this stage of the disease than the extreme discomfort and pain present with even a slight increase in temperature as ascertained by the thermometer.

The rash.—The redness of the face and neck, with the mottling at the lower part of the neck, more especially in the neighbourhood of the collar bones, must be regarded as the first evidence of the rash; it is distinct and characteristic—without it the disease could not be pronounced; by it the diagnosis is conclusive. It is not, then, a question of the disease threatening, but the symptoms are sufficiently pronounced to definitely state that the patient has the disease already. During this, the first day of the illness, the patient is very drowsy, sleeps a good deal, and takes nourishment. The temperature varies but little during the first twenty-four hours, is not affected by quinine, but can be reduced a degree or so by fifteen-grain doses of antipyrin. On the second day of the illness an exanthematous mottling of the back is apparent. The patient is now more restless, less drowsy, complains of having passed a bad night, and of the pains in the forehead, eyes, and back being greater. Average temperature 102°; pulse 100 to 110. On the third day the patient's chest, abdomen, back, and sides are covered with a profuse compound rash; the exanthem seen on the back is apparent in all these regions, and in addition and obscuring the exanthem is a miliary and papular rash in great abundance. The forehead shows papules, the chin likewise; but the limbs, in one-third of the cases only, are involved, the lower limbs much less frequently than the upper. The patient's face is still red. Temperature morning and evening average 101·5°; pulse 100 to 110. The pain in the back becomes very great, at times agonising, the patient groaning and calling out wildly. Headache and orbital pain severe. Tongue remains clean. Bowels throughout the disease may remain natural, but diarrhœa is present during the second and third days if it appears at all. The fourth day is spent in complaints of pain in the back and head, and orbit, and may be as severe as on the previous day. Temperature averages, morning and evening, 100·8°. The patient's face is less red. The rash remains, but with less redness. Appetite completely gone; taste of everything perverted. On the morning of the fifth day the rash is found to have almost subsided: here and there an angry papule exists, or even a small boil may develop in places. Temperature 100·1° (average morning and evening). On the evening of the fifth day or the morning of the sixth, crops of small coalescent wheals appear, and itching involves the hands and forearms, legs, and feet. The redness of the face and the body rash have faded. Temperature 98·8° (average); pulse 80 to 90. The patient is now almost free of pain; only soreness complained of. The only disturbing symptoms are itching of hands and feet, want of appetite and taste, and great weakness. The patient feels "over it," and talks of his illness as a thing of the past.

Sequelæ.—1. For three days the patient can eat but little and is so weak that he feels disinclined to attempt to walk. Soreness is experienced in the back and sides, but the aching of the head and orbit is gone, although giddiness is complained of. A marked symptom in all is complete absence of taste; champagne, vinegar, tea, and bread being sent away with an expression of disgust. This cannot be

put down to the state of the tongue, as is usual, but to a specific disturbance of the glosso-pharyngeal nerve. 2. A further sequela is a subcutaneous hæmorrhage from the capillaries of the legs; in severe cases so constant is this that it might be classified as a fourth rash, appearing on the sixth or seventh day. The mottling continues for a week, when it gradually begins to fade. 3. A recrudescence of the rash is observed in about half the cases, the reappearance being marked after a bath for three or four days. When it appears, however, it goes off in an hour or so. 4. A peculiar elevation of temperature took place in seven—i.e., one-seventh of the cases observed. Once a week for three or four weeks an elevation of temperature, headache, and restlessness disturbed the patient for about twelve hours. Temperature rose no higher than 100° in any of the cases. 5. In a few cases boils of a most painful nature, in crops lasting for about fourteen days, followed immediately upon the subsidence of the fever. 6. Well-marked desquamation took place three weeks after convalescence in three cases.

Diagnosis.—Is this a rubeola at all? Should it be classed with the genus measles? If it is measles, is it to be placed in a separate group, or with ordinary measles, or with German measles? The only other existing disease for which it may be mistaken is dengue fever. In the few cases with foul tongues and diarrhœa the suspicion of typhoid fever crosses one's mind, but the illusion is speedily dispelled. As regards the diagnosis from dengue fever, there is no doubt the reason why this term crept in is on account of the great pain experienced on the third and fourth days. The pain as described was in many cases agonising, and it seemed as though dengue alone could be associated with such. We have many prominent differences: 1. That the pain in dengue lasts for a long time, weeks or months, whereas in the disease we are concerned with it is only a question of a couple of days. The pain subsides with the fever, and is therefore dependent on a vascular fulness of muscle. Dengue fever, again, is extremely infectious when it gets into a family or school; the exception is for anyone to escape the epidemic. The exception in the disease we are dealing with is for a second person in the household to catch it. In only three families have I known it infect more than two of the inmates, and in most cases one adult only was attacked. In many instances the mother was laid up, whilst the children escaped, even although they had never had measles of any sort. From these the major considerations, as it were, of the differences between dengue and the disease in hand, we may rid ourselves of the belief that it is dengue fever. 2. From ordinary measles: (*a*) Measles attacks almost invariably children, while this disease attacks adults; (*b*) coryza, bronchial, and pneumonic complications are frequent in measles; they are almost unknown, except, perhaps, a little sneezing, with slight catarrh of throat, in this affection. In one case feverishness, with an intense watering at the eyes continuing for forty-eight hours, with headache and backache, left no doubt that the patient had the disease. These symptoms are important as showing some alliance to measles. (*c*) The dates of the eruption do not correspond with the time of the appearance of the rash in measles. One cannot positively say that it is measles the patient has until the fourth day, when the redness shows itself in crescents. On the first day of invasion of this disease, however, the diagnosis is convincing: the redness of face, mottling of neck, pain in the back, temperature 102·5°, character of headache and orbital ache, are perfectly distinct. (*d*) The character of the rash—a mixture of exanthem, miliary spots, and papules—is totally unlike ordinary measles. (*e*) Deaths are common in children from measles: in tropical measles it is unknown. (*f*) Pain in measles is but slight: pain in marked cases of tropical measles in adults is agonising. (*g*) Measles seldom occur a second time, and still more rarely a third time. A fourth time I have never heard of; yet there is one case I know of in which measles had occurred three times, and yet this person caught the disease. Taken altogether, there can be no confusion between ordinary measles and this disease to the professional eye; and mothers of families whose children have had measles in England are well aware that this is a different disease. Without further details as regards the sequelæ of measles, I will dismiss measles as a distinct species (if not genus) of disease. 3. The third disease from which it is necessary to separate tropical measles is German measles—Rötheln. That in the minds of most of us a difference does exist is plain, from the doubt there exists as to the name to be given. "What we call German measles" is an admission that we are not sure of our ground that some differences exist, and the newly arrived practitioner to China is told that measles is a different disease here. So different has the present epidemic as attacking adults been that, as mentioned before, some of us have gone the length of calling it "dengue fever." Now the definition of rubella or German measles—Rötheln—will suffice to bring the differences prominently before us.

Rötheln is a specific eruptive fever, the rash appearing during the first day of the illness, beginning on the face in rose-red spots, extending next day to the body and limbs, subsiding with the fever on the third day, and not preceded by catarrh or followed by desquamation (see Quain's Dictionary). In the disease under consideration we have no "spots" on the first day; the body rash appears on the third day, not the second, and looks like a profuse prickly heat. The limbs are not attacked until the fifth or sixth day, and the rash is like a nettle rash. Catarrh is sometimes present with tropical measles, and desquamation sometimes follows. Tropical measles lasts twice as long as German measles; there is some resemblance in many of the minor symptoms, but in the majority dissimilarity.

Varieties.—1. The first case of a measly nature I saw was in the month of August, 1888, when a girl six years of age was in bed with a temperature of 105°. She had been perfectly well the day before. On the day following my first seeing her she was covered with a prickly-heat-looking rash, and the temperature was 99°. The rash looked exanthematous, but both miliary and papular spots were present in abundance. The following day—that is, the third day—the temperature was 98·4° and the rash well-nigh gone. This was entered in my case-book as an example of fever with a short-lived rash. I did not venture on a name for it. 2. In some seven cases patients have been in bed with the exact symptoms of tropical measles, but with nothing more than a redness of the face and skin to mark the eruption. In all these cases a catarrh of the throat was present to some extent. The reason for believing this to be the same disease *sine eruptione* was that tropical measles was in the house at that time, or immediately before or after. That they were ill six days, that the headache and backache were characteristic, and the low temperature without intermissions or remissions—102° to 102·5°—was sufficient to separate it from malarial fever. 3. A third variety, occurring in three cases, was that all the symptoms were complained of, but for the first five days there was only redness of the face. On the sixth day, however, the characteristic wheals—like nettle rash with much itching—appeared on the hands and feet, when the temperature immediately fell. As an indication of the possibility of exact diagnosis in this disease, I relate the following: Two sisters—twins, in fact—were in the same bed with fever. On first seeing them I diagnosed that one of them was to have tropical measles, but that the other had remittent fever. I was bold enough to make this statement to the mother. The patient with the remittent fever lost her remittent type, and it became in two days a well-marked quotidian ague. The other continued day after day with only a red face, backache, headache; temperature between 101° and 102·5°; and it was not until the sixth day that the characteristic rash appeared on the hands and feet, when the temperature immediately fell and she was out of danger. I mention this to show that I have a firm conviction that the disease can be diagnosed from the first day of the illness. 4. A variety of a measly disease occurred in myself. I felt dyspeptic and low, with general malaise, for a day or two; all at once the cloud lifted, and so convinced was I that something had happened that I stopped at a lamp post in the street, and found by the light of the lamp that my hands, wrists, and forearms were covered with a fine pink exanthematous rash. This, with a slight prickling, extended in twelve hours over face, body, and lower limbs, and disappeared. In children under seven the disease, measles, as we meet with it in Hong Kong, is a much milder disease, than we know it at home. That real measles and German measles do exist I have not the least doubt; but that we have a distinct disease travelling, it may be, with them and occurring in different individuals there seems little doubt. Just as chicken-pox is epidemic at the same time as small-pox, so may tropical measles coexist with rubeola or rubella. Chicken-pox, however, gives no protection from small-pox, nor *vice versâ*;

so neither rubeola nor rubella gives protection from rubeola tropica.

The prognosis of this disease is fortunately favourable. No death has been recorded, and not only so, but, beyond a weakness and discomfort for five or six days after getting out of bed, no sequelæ of importance ensue. Shortly, the disease might be put as six days' incubation, six days' invasion and rash, and six days' convalescence.

Pathology.—One thing that struck me in this epidemic was the mild beginning, the growing severity, and the gradual diminution in severity as the end of the epidemic was reached. The first few cases lasted a day or two, with, in some cases, a temperature of even 105°. As time wore on and fresh cases were attacked, the intensity of the disease grew to a crisis, and after that the subsequent cases were mild. At first there was irregularity in the symptoms, but as the disease advanced they settled down into a groove and followed a marked type. Towards the end of the epidemic the mildness of the type was more marked than its irregularity. I have no hesitation in saying that this disease is dependent on a ferment, from the nature of its spread and behaviour, as in a cholera epidemic the irregularity of the commencement is marked by diarrhœa, colic, enteritis, cramp, and spasms. As the disease advances, the severity of the epidemic is marked by fatal cases; but towards the end of the epidemic, the severity being spent, colics, spasms, cramps, and severe purging fade away into slight diarrhœa and loose bowels. So with calf vaccine, its intensity increases as it passes from arm to arm for a time, and then its power fades as its ferment gets played out. In this, then, tropical measles follows the example of many other diseases, and the term "ferment" may be safely applied to the means by which it is spread and developed.

Questions.—1. Is this disease of the nature of measles? 2. Is it confined to the tropics, or met with in the tropics generally? 3. Is it distinct from dengue fever? 4. Is it German measles? 5. Is it a variety of ordinary measles or of German measles? 6. Would rubeola tropica or rubella tropica be the better term?

The treatment is simple, the only special requirement being a hypodermic injection of morphia during the third and fourth days of the illness in adults. Antipyrin did not relieve the headache or markedly reduce the temperature.

CONGENITAL DISLOCATION OF BOTH THUMBS ASSOCIATED WITH SPINAL DEFORMITY.

BY W. L. WOOLLCOMBE, F.R.C.S. EDIN.

CONGENITAL DISLOCATIONS have been observed and described from the time of Hippocrates, but it is only in the present century that any great amount of attention has been bestowed upon them. Since the time of Dupuytren, however, there has been a large amount of energy expended on the subject, and the observations of that great surgeon have been followed up by Breschet, Sédillot, Pravaz, Guérin, Robert Smith, and a number of others. In spite, however, of the searching investigations of these surgeons, we are left in considerable doubt as to the etiology of congenital dislocations, as is evident by the number and surprising variety of causes assigned by various observers, from some original defect in the ovum up to traumatisms inflicted on the pregnant uterus, and intra-uterine convulsions. Another class of cases, too, has been included by some in their descriptions and statistics, thereby still further complicating the question. I allude to those cases in which the disarticulated bone and its socket are both healthy and fully developed, as are the surrounding muscular and ligamentous structures, and in which the displacement almost certainly took place during forcible delivery. These cases should of course be included in ordinary traumatic dislocations, although often the practitioner is not conscious of the injury inflicted. It is because of its bearing on the etiology of congenital dislocations, as well as the fact of the joints implicated not being amongst those usually described, that I have thought the following case worthy of publication. In describing cases of this deformity, almost all writers have taken as their type congenital dislocation of the hip, whilst a similar affection of the fingers is only alluded to in a very cursory fashion, and by some authors is said to occur only in monstrosities, where almost all resemblance to the human form is lost.

M——, aged forty-six, a married man with no family, a tailor by trade, came for advice on account of loss of power in the first, second, and third fingers of the right hand, so that he was quite unable to use his needle. This was only of two weeks' duration. He came of a healthy family, having eight brothers and sisters, four older and four younger than himself, all particularly healthy and well-developed individuals. He had never heard that there was anything unusual in regard to his birth, and believed that he was born at the full time. His thumbs, however, had always been in their present condition. On examination the fingers mentioned were found well developed and healthy, and the cutaneous sensation perfect. On attempting to use his needle, however, they became useless. He was suffering, in fact, from an affection analogous to "writer's cramp." The thumbs of both hands presented the following appearance. The first phalanges were displaced forwards at their proximal ends, which lay in front of the corresponding metacarpals, and formed a well-marked projection in the thenar eminence, while the head of the metacarpal formed a still larger prominence on the dorsal aspect. The phalanges of both thumbs were much wasted or under developed, those of the right hand more so than those of the left, and thus the left thumb measured from the base of the phalanx to the tip of the nail 2⅜ in., while the right only reached 1⅞ in. The thenar eminence on both sides was quite wanting, making the deformity appear much more striking than it would otherwise have done. The spine presented the following condition: In the neighbourhood of the upper sacral and two lower lumbar vertebræ was a prominence, consisting of a heaped-up mass of bone, forming a well-marked projection and covered with a tuft of long and dark but not particularly fine hairr. Above this, involving the lower half of the dorsal region, was an equally well-marked depression, so that the inner border of my hand could be sunk deeply in between the long spinal muscles on each side, giving the impression that the spines and laminæ of this part were absent, although the hollow was so arched over by the muscles of each side that a thorough examination was very difficult. The lower extremities were fairly developed, and there was no deformity of the feet; in fact, the only other abnormality was a deep depression in the mastoid process of the left side, which he says has always been there, and is not the result of an abscess or blow.

This case certainly lends colour to the theory of an error in development, dependent on an original defect in the ovum. The question of treatment does not arise, owing to the man's age. With regard to the loss of power in other fingers, for which he presented himself, a cure was soon effected by massage and electricity.

Plymouth.

THE ABSENCE OF ORTHOPNŒA IN (FATAL) CARDIAC DILATATION, ESPECIALLY WHEN AFFECTING THE RIGHT SIDE.

BY HENRY HANDFORD, M.D. EDIN., M.R.C.P. LOND.,
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THE absence of orthopnœa in many cases of severe and even fatal cardiac disease is an old observation, but its proper significance has not yet been established. It has been suggested by the late Dr. Hilton Fagge that the absence of orthopnœa is characteristic of right-sided affections. It is certain that in the most severe cases of anæmia, even where there is some œdema of the extremities and the dilatation of the right heart is most marked, all tendency to orthopnœa is absent, and the patient is able to lie quite flat, although respiration is persistently quickened, and on exertion dyspnœa is extreme. Dr. Wm. Russell has suggested that the upright position, besides enabling the diaphragm to contract to better advantage and the muscles of extraordinary respiration to be brought more fully into play, facilitates the passage of the blood from the left

auricle into the left ventricle by the action of gravity, and diminishes the freedom of regurgitation from the ventricle back into the left auricle. The right auricle is placed too much to the right for the force of gravity in the upright position to be of much advantage in furthering the onward flow of blood. However much or little truth there may be in this explanation, it does not seem sufficient alone to account for such an important difference. The fact of the occasional absence of orthopnœa in the most severe cardiac cases is undoubted. A completely satisfactory explanation is still wanting.

The following cases were seen in private, and consequently were not completed by a necropsy. The first two had in common also the absence of all trace of dropsy and of any material quickening of the heart's action. This again is no new observation, but we are not yet able to say what forms of heart disease will proceed to their fatal termination without dropsy and without materially quickened action. The increase in the speed of the pulse and of the heart beats can usually be taken as an accurate measure of the heart's weakness; but not always, even apart from "the slow pulse of fatty degeneration" and of chronic myocarditis. Simple dilatation to a slight degree is very common and is readily compensated for many years, producing few or no symptoms except on exertion. Sometimes it leads to regurgitation through one or other of the auriculo-ventricular openings, sometimes not; but there is almost always incomplete emptying of the ventricle during systole. Serious dilatation is produced suddenly more frequently than is generally supposed, especially when the heart has previously been damaged by over-exertion, acute disease, anæmia, debilitating habits, or chronic non-progressive valvular defect. The disorders of cardiac innervation have received much attention of recent years, and the field is ever widening; but the influence of mental distress[1] and worry in enfeebling the heart has been too much neglected since the rapid advances of experimental physiology have enabled the mechanical theories of cardiac pathology to hold the field so exclusively. We may hope that in the near future the discovery of cerebral centres for the viscera (and among them for the heart) will render clearer many problems which at present neither physics nor morbid anatomy elucidate.

Cardiac dilatation in its severer forms, and especially when the right side is affected, is extremely fatal, and the only chance of successful treatment depends on the recognition of the earliest symptoms. In acute dilatation of slight or moderate extent, affecting young people, the heart may probably be completely restored by suitable treatment if sufficiently prolonged; but it remains unduly susceptible to fresh dilatation, which, if once or twice repeated, is likely to remain permanent. In a considerable number of instances, however, where restoration is assumed, it is in reality compensatory hypertrophy which leads to the disappearance of symptoms, and the cavities remain enlarged; but with healthy tissues, and no repetition of the increased strain, the heart may continue for many years in a state of perfect compensation. Where the dilatation is considerable, it is very doubtful whether any material contraction of the cavities can be brought about by treatment.[2] Digitalis and strychnine, cautiously employed, with iron if the condition of the gastric and hepatic circulation permit, are the most promising direct medicinal remedies. Theoretically strophanthus, by not contracting the small arteries, and so raising the peripheral resistance, should be more successful than digitalis; but practically it is found to be inferior, though at times a useful alternative. In acute cases the main principle is absolute rest for a short period: not long enough to lead to degeneration of the cardiac muscle, but giving sufficient time for compensatory hypertrophy; and afterwards a total absence of violent exertion for a very prolonged period. It is difficult to draw any sharp distinction between a temporary distension of the cavities, which subsides in a few minutes or hours when the cause is removed, and is physiological; and a more prolonged (or permanent) dilatation which is pathological. In chronic cases the aim must be to diminish the work of the heart by reducing vascular tension, if necessary by aperients &c., and by the strict regulation of diet and exercise. In fact, failing compensation, in so far as it is due to increased resistance, which can be diminished, or to depressing influences (tobacco, mental distress, worry, &c.), which can be removed, is very amenable to treatment; but so far as it is caused by degeneration of the cardiac muscle it can only be slightly benefited by cardiac tonics and general improved hygiene. Alcohol, even in quite small quantities, seems generally to be prejudicial in these cases. Without sleep very little progress is made. Sulphonal, though almost entirely free from danger, is in such cases often useless. Chloral causes more depression and entails greater risk. It gives only short periods of rest followed by increasing weakness and prostration, and leaves the patient drowsy next day. The preparations of opium, besides giving sleep, increase the force and volume of the pulse, and produce a feeling of well-being which may last until the next night. The use of opium undoubtedly involves more risk than in the case of sulphonal or chloral. Smaller doses than usual should be given, especially when used hypodermically ($\frac{1}{15}$ to $\frac{1}{12}$ gr. or less), and the patient should not be allowed to sleep too long (i.e., more than four or five hours) without being roused. The mere presence of albumen does not absolutely contraindicate the use of opium so long as the vascular tension is good and the quantity of urine normal or above normal.

CASE I. *Chronic dilatation without valvular lesion; rapid failure of compensation; death without orthopnœa, dropsy, or materially quickened action.*—A tall, well-built, athletic man, forty-seven years of age, formerly had done a good deal of mountaineering, but had not, so far as he knew, damaged his heart by that violent form of exercise. About twenty years ago, after a throat affection which was suspected to be diphtheritic, his pulse was noticed to be very slow, and attention was directed to his heart, but nothing wrong was discovered. His pulse remained slow (40–50 to the minute), but it is not known whether it was so before his throat affection. He was shortly afterwards examined for life assurance, and passed as a first-class life. He had never suffered from rheumatism or gout, was very abstemious, and lived a regular life. He was accustomed to take a good deal of exercise, hunting and shooting, and felt no undue fatigue after a walk of twenty miles. For several years he had much anxiety and worry, which told upon him a good deal. In May he began to feel out of sorts, lost his appetite, became sleepless, but was still able to take long walks without any immediate ill results. From about this time he began to suffer from a feeling of tightness in the chest and dyspnœa on exertion. There appeared to be no cause for this except a new source of mental distress. His regular medical attendant had hitherto no ground to suspect any cardiac affection. In July he consulted a leading London physician, who told him that his heart was dilated, that he had better go in the country, and take three weeks' complete rest. He told the patient's wife her husband's life would probably not be a long one, but gave no indication of immediate danger. The man grew rapidly worse, and became unable to walk more than a few steps without great dyspnœa and alarming prostration. I saw him in the middle of August, from which date he first kept his bed entirely. The apex beat was feeble and diffused in the fifth interspace, an inch outside the nipple, and the heart's action was very irregular. There was no murmur, but the first sound at the base was very weak. The liver was engorged and tender, and the jugulars full and pulsating. The radial pulse was beating 70 to the minute. The tension was exceedingly low; but the vessel was full between the beats, and felt to the finger more like a tense and distended vein than an artery, giving the impression of there being little onward propulsion of the blood. There was a slight cough; but the bases of the lungs were quite clear, and remained free from râles, certainly until within forty-eight hours of his death. The urine was scanty, high coloured, and free from albumen at first, though later a cloud appeared, but no casts could be found. For the first three weeks that he was confined to bed he improved considerably, had less distress, and to some extent regained his appetite. But after that, without discoverable reason, he rapidly failed, and died in a few days, at the end of September. During the whole of his illness there was not the slightest trace of dropsy. He was able to lie flat and sleep with only one pillow under his head. As regards treatment, digitalis soon reduced the speed of the heart to 40—50, raised the tension of the pulse, and produced temporary amelioration. Aperients, especially a pill containing half a grain of calomel, caused alarming prostration. In the earlier stages,

[1] Fraentzel: Krankheiten des Herzens, vol. i., p. 244; Leyden: Zeitschrift für klinische Medicin, Bd. vii., S. 570.

[2] Dr. Solis Cohen (Therapeutic Gazette, Feb. 16th, 1891), in an article on Simple Dilatation, points out that we cannot restore the heart to its normal size.

before he was confined to one floor, he experienced the benefit of the old but insufficiently known device of going upstairs *backwards*, by which means much less breathlessness and fatigue were caused.

CASE 2. *Acute cardiac dilatation supervening upon an old non-progressive lesion; death in fifteen days, without dropsy, orthopnœa, or quickened pulse.*—The patient was a railway inspector, aged about forty, who three years ago had been told that one of the valves of his heart leaked; but he never experienced any cardiac symptoms until fourteen days before his death. Nine months ago he had influenza, and recovered rather slowly, but, as he considered, completely, and no heart murmur was then detected. During the frequent fogs of the late winter he had been anxious and overworked, as well as much exposed to the severe weather. An attack of bronchitis laid him up, and I was asked to see him in consultation on the thirteenth day after he had taken to bed. I found him pale and anxious, with an extremely small thready pulse, beating regularly 84 to the minute. He had a troublesome cough and copious blood-stained sputum, evidently due to pulmonary apoplexy. He was able to lie perfectly flat in bed, with only one small pillow, and there was not the slightest trace of œdema or dropsy. His urine had been free from albumen until the last few days, when a slight cloud appeared. The jugulars were not only full and pulsating (systolic), but were tense to the finger, and showed evident positive pressure. There was a heaving expansile pulsation over the liver, and on applying the stethoscope to it a systolic murmur was audible. The heart's apex beat was weak and diffused, and could not be defined. There was a mitral murmur propagated into the axilla, a weak systolic and a loud diastolic aortic murmur, and at the lower part of the sternum a systolic murmur quite startling in its loudness and undoubtedly of tricuspid origin. He was evidently moribund, and died within twenty-four hours.

I may add incidentally that in both these cases alcoholic stimulants increased the distress. From the history it is probable that there was an old aortic lesion; but from the absence of symptoms, and the fact that no cardiac disease was noticed nine months before his death, it is evident that compensation was well established, and that his fatal illness was not due to progressive heart disease—one cavity dilating after another,—but rather to an acute dilatation, in which the right side was chiefly affected, caused by fatigue, worry, exposure, and finally by an attack of bronchitis affecting a heart already damaged, and occurring in a man of feeble recuperative power.

In the first case there was almost certainly no valvular lesion, and the slowness of the heart in early life without any previous heart affection renders it very unlikely that there was at that time either sclerosis of the coronary arteries or myocarditis. It is probable that the exertion of mountain climbing caused a dilatation which was compensated by hypertrophy, but never disappeared. Dilatation so caused affects, I believe, chiefly the right side of the heart. During exertion the skin becomes warm, the systemic arteries and capillaries dilate, and so the great increase of the peripheral resistance is lessened; but the blood is returned more and more rapidly to the right side of the heart, which becomes overloaded. The area of the small arteries and capillaries of the lungs is smaller than that of the systemic circulation, so that an equal degree of dilatation does not to the same extent relieve the pressure, and meet the needs of the increased rapidity of circulation. The pulmonary capillaries become engorged, and there is great breathlessness. The thin walled right ventricle is not so capable of bearing strain as the thick-walled left, and consequently it dilates, and during systole does not completely empty itself. Dr. Clifford Allbutt's description of his own experience of dilatation of the right heart while mountain climbing is very graphic. If the dilatation is oft repeated or becomes permanent the left ventricle shares in it more and more. The left ventricle, by increasing the pressure in the capillaries, can hasten the venous circulation and help the right heart. Hence post mortem considerable dilatation of the right heart without involvement of the left is scarcely ever found. A younger brother of the first patient has since damaged his heart in the same way by excessive mountaineering, and now has to lead a more careful life; and the family tendency to cardiac weakness is further shown by some deranged action of the heart in a daughter. The pulse in the first case was peculiar, and between the beats closely resembled to the touch the external jugular of the second case. The size of the radial was no doubt due to the athletic life the patient had led, the low tension to the feebleness of the left ventricle, and the fulness between the beats to peripheral resistance. This latter might be owing to a slight degree of renal sclerosis, of which, however, there was but little evidence, but more to the backward pressure in the venous circulation blocking the capillaries. This makes it all the more surprising that there should be no œdema, even in the extremities. It would appear as if dropsy depended quite as much upon the state of nutrition of the tissues as upon the central organ of the circulation.

The next two cases, very shortly narrated, further illustrate the absence of orthopnœa in fatal cardiac affections. In both there was probably fatty overloading, with some dilatation. I agree with Fraentzel, who is of opinion that "fatty heart" alone as an independent morbid entity cannot be diagnosed. Both the most extreme fatty overloading and fatty degeneration may be found post mortem when there have been no cardiac symptoms.

CASE 3. *Acute dilatation partly due to mental distress, probably fatty overloading; rapid death without orthopnœa or dropsy.*—In August, 1890, I was asked to see Mrs. G—— in consultation, on account of great breathlessness, of about a week's duration. She was very stout, aged forty-six, had had eleven children, and had come over from America only a month previously. She had suffered severely from seasickness on the voyage, but otherwise considered herself quite well. She was much disappointed in the object of her journey, and had become very depressed, often crying for hours together. Her appetite failed, she lost strength, but she had been for a drive two days before and had slept well the previous night. There was no cough, headache, sickness, or œdema, but the urine was scanty and contained a trace of albumen, though no casts. The pulse was small, regular, and 120 to the minute. She was so exceedingly stout that it was impossible to ascertain by percussion or palpation the existence of any enlargement of the heart. The heart sounds were loud, distinct, and free from murmur or other abnormality except an accentuated aortic second sound. The extremities felt cold. She had no pain anywhere, and had had no anginal attacks. There was no orthopnœa, but she lay flat, most comfortably on the right side. She could not sit up or lie long on the back without a great increase of the breathlessness, which was her chief complaint. Any exertion caused alarming symptoms. She remained much the same during the night, in spite of the use of stimulants, digitalis, and aperients. The following morning, about eight o'clock, she became cyanotic, and died at nine. The emotional state had led to a diagnosis of hysteria, and the breathlessness was supposed to be neurotic, but the alarming increase of the dyspnœa on the slightest exertion decided its cardiac origin.

CASE 4. *Rapid cardiac failure due to excitement (anger): absence of orthopnœa.*—In 1888 I was sent for to go some distance into the country to see in consultation an old gentleman aged seventy, rather stout, but hitherto in fair health and active. He had been a little out of sorts for a few days, but going about as usual until that morning. I saw him a little after midnight, and found him lying quite flat and on his right side. His pulse was "running," of low tension, and uncountable. The heart's sounds were very feeble, and not distinctly audible. The cause of this sudden collapse was very obscure until we learned that he had had a violent quarrel that morning. He was very much upset, became quite prostrate, and died next day. The cause of death was evidently the failure of a weakened heart from mental shock. Orthopnœa was quite absent. It would appear that the upright position gives relief chiefly in failing compensation in valvular disease and in the failing heart of renal disease; but that in dilatation, especially when the right side is affected, and in degenerations of the cardiac muscle, as in anæmia, after fevers, diphtheria, septic poisoning &c., the tendency to faintness produced by the upright position more than counterbalances any other advantages.

Nottingham.

NEW INFIRMARY AT TOXTETH.—Mr. James Pratt, senior member of the Toxteth board of guardians, will, on Monday next, lay the foundation stone of this new infirmary, which is to be erected as an adjunct of the Toxteth workhouse, Smithdown-road.

ASPIRATION IN PNEUMOTHORAX.

BY G. A. SUTHERLAND, M.B. EDIN., M.R.C.P. LOND.,
PHYSICIAN TO THE NORTH LONDON CONSUMPTION HOSPITAL.

AMONGST the many complications of phthisis none causes greater anxiety than pneumothorax, the mortality of which, according to Dr. Samuel West's statistics, is 66 per cent.[1] The line of treatment usually adopted is expectant, but that some more active interference may be carried out with advantage is illustrated in the following case.

H. V——, aged thirty-two years, was seen for the first time on Dec. 15th, 1890. He had been in India for several years, and had suffered from ague and dysentery. He had had rheumatism occasionally, and when a boy had brought on a "strain of the heart" by running races. There was a family history of phthisis. He stated that he had had sickness and vomiting after dinner for a few days, accompanied by the old malarial symptoms. On the previous night he had coughed up blood seven or eight times. There had been no sweating or loss of flesh. He was poorly nourished, and looked very much pulled down. The chest was well formed, and no evidence of disease of the lungs was detected on physical examination. As regards the other organs, the only point noted was a reduplicated second sound at the base of the heart. There was a slight attack of hæmoptysis next day, and the temperature in the evening was about 101° for a week, after which all symptoms disappeared, and he resumed his work in the following month. Two months later there was a recurrence of the hæmoptysis, with cough and profuse mucoid expectoration, which was found to contain tubercle bacilli. The only sign of pulmonary disease detected was slight crepitation near the root of the left lung posteriorly. He was sent to Ventnor in March, preparatory to leaving England for the Cape at the end of the summer. In May, 1891, he returned to town very much worse. He had lost flesh and was troubled with violent cough, followed by sickness and great depression. There was slight pyrexia in the afternoon and sweating at night. The left lung showed dulness at the apex anteriorly, and over the upper third posteriorly, with blowing breathing and crepitation, and friction sounds were heard over the left scapula. No evidence of disease was detected in the right lung. On June 22nd, after severe and prolonged coughing, he was seized with acute pain in the lower part of the left chest, passing from the front to the back, and accompanied by headache, sickness, sweating, and great prostration. The temperature was 104°, pulse 120, and respiration 32. The decubitus was right sided. The cardiac sounds were inaudible to the left of the sternum, but louder than normal to the right of it. Expansion was very slight on the left side of the chest, and vocal fremitus was entirely absent. The percussion note over the front of the left lung, from the clavicle downwards, and including the cardiac area, was hyper-resonant, and this condition existed also in the axilla, and posteriorly from the middle of the scapula to the base. Over this area the breath sounds were almost inaudible, and the vocal resonance was very much diminished. The breath sounds were more audible along the left side of the spine. The expectoration was muco-purulent, blood stained, and contained many tubercle bacilli. The treatment adopted was nourishing fluid diet, alcohol, and morphia in full doses, both hypodermically and by the mouth, which soon checked the troublesome cough and retching, and the severe chest pain which these caused. He had occasional attacks of dyspnœa with cyanosis. The decubitus became left-sided, any other position causing him acute pain. The strength was well maintained until the third day, when the temperature again rose to 104°, and there seemed to be an increase of pressure in the chest, followed by progressive weakness. On the eighth day of the attack he became much weaker, and at midnight his condition was critical. There was muttering delirium, the respiration was 36 per minute and very laboured, and the pulse was so weak and irregular that it could not be counted. There was a uniform distension of the left side of the chest, with complete absence of expansion, and vocal fremitus. The area of hyper-resonance extended one inch and a half to the right of the sternum, and the cardiac apex was felt one inch internal to the right nipple. The breathing over the hyper-resonant area was distant amphoric, with occasional tinkling râles, and the "coin sound" was well marked. The heart sounds were faintly audible to the left of the sternum. It was resolved to puncture the chest for relief of pressure. The needle of an aspirator was inserted into the left pleura in the axillary region, but no air passed out. The aspirator was then attached, and the air in the receiving bottle was partially exhausted. On opening the connexion, air was at once heard to pass into the bottle, and by means of slow and interrupted aspiration a considerable quantity of air was removed from the pleural cavity. The process occupied about an hour, and the patient's condition was manifestly improved. The respiration fell to 24, and the pulse to 108, becoming at the same time fuller and stronger, while the heart sounds could be heard much more distinctly to the left of the sternum. On the following evening there was a recurrence of the cardiac weakness, and an area of dulness at the base of the left lung posteriorly was noted. Aspiration was again performed. At first air only was withdrawn, then air mixed with fluid, and finally nine ounces of clear fluid were evacuated. A friend who was present noted the change in the position of the cardiac apex during the process, and found that it moved three-quarters of an inch to the left, while the pulse again showed marked improvement. There was no cough on either occasion. A few days later expansion became evident on the left side, with sinking in of the intercostal spaces during inspiration, and the breath sounds became louder, blowing in character, and in parts amphoric, with tinkling accompaniments. At the end of a month, progress being delayed by a slow formation of fluid in the left pleura, with displacement of the heart to the right, the chest was again aspirated and thirty-four ounces of clear fluid were withdrawn. He then improved rapidly, and in September he was found to have gained eleven pounds and a half in weight, and could walk four miles without fatigue. There remained impaired resonance over the left side of the chest, but the expansion was fairly good, and the breath sounds, although weak, were audible all over. He sailed for the Cape on Oct. 8th, 1891, and has continued in good health.

Treatment by aspiration is not advised by the leading authorities in cases of pneumothorax. Dr. Douglas Powell[2] speaks of the timely introduction of a fine trocar, when there are signs of increasing pressure within the chest, but says nothing about aspirating the pleura for air. Dr. Wilson Fox[3] refers to the treatment by a simple trocar, but says that "aspiration is best avoided; it brings with it the danger of renewing the fistulous opening, and this effect has actually been observed in a secondary effusion following pneumothorax." Dr. Hilton Fagge[4] says an aspirator should never be used, on account of the danger of reopening the original aperture. It is evident that the use of a trocar will only be of service when the pressure of air in the pleura is greater than that of the atmosphere, which, according to Dr. Hilton Fagge, is by no means generally the case. On the other hand, Dr. Douglas Powell has shown that lateral displacement of the heart occurs in pneumothorax, owing to the normal elastic retraction of the sound lung, which drags over the mediastinum, even when the pressure of air is not greater than that of the atmosphere. If, then, the use of a simple trocar be accepted as the final treatment in the cardiac asthenia of pneumothorax, we cannot expect very great relief in cases in which the intra-thoracic pressure is not greater than that of the atmosphere. The dangers of slow aspiration in suitable cases have, perhaps, been exaggerated, and the above case shows that the benefit may be very marked. In considering the question of aspiration one point must not be lost sight of—namely, that an attack of pneumothorax, by giving rest to the affected lung, may be a most effective therapeutic agent in phthisis. This patient's phthisical condition at the onset of pneumothorax was very serious, and was rapidly getting worse, while two months later no evidence of active phthisical mischief could be detected, nor has any since appeared. It is probable that the compression of the lung, at first by air and later by fluid, had brought this about, and that a repetition of the aspiration, except when urgently called for, might

[1] THE LANCET, vol. i. 1884, p. 791.

[2] Diseases of the Lungs, p. 142.
[3] Diseases of the Lungs and Pleura, p. 1118.
[4] Principles and Practice of Medicine, vol. ii., pp. 192, 199.

have prevented this good result. In the management of the above case I had the benefit of several consultations with Dr. Cheadle, to whom my best thanks are due for much valuable assistance and advice.

[NOTE.—Writing on May 2nd, patient states that a large amount of fluid was withdrawn from the left pleura in January, that no signs of phthisis are present, and that he is well and strong.]

Carlton-hill, N.W.

A CASE OF CERVICAL DISLOCATION.

BY DONALD MACPHAIL, M.D.GLAS.

THE following case is worth recording from the severity of the effect produced by a trivial cause.

Late on a Saturday night in April I was hurriedly called to see a man "in a fit" at a barber's shop in the village here. When I arrived at the place I found, extended on the floor, the dead body of a man whom I had known by sight for the last ten years. He was a collier, a strong healthy man, aged forty-three, about 5 ft. 9 in. in height, and weighed probably between 11½ and 12 st. He had always been a heavy drinker, but had otherwise been healthy. Those present told me that he had been lying on the floor for some time, supposed to be in a drunken sleep. It was evident that he had been dead for some time. The face was pale, with some faint, livid blotches, and there was a slight bruise on the left temple, the eyes were closed, and the pupils normal in size; the lips were blue, but the mouth was closed, and there was no froth about it; the tongue was not protruded or between the teeth; the moustache was saturated with colourless fluid, which had apparently flowed from the nostrils. There was no evidence of the man having vomited. My first thought was that he had been suffocated, and I tried to examine his throat. I found it very difficult to get my finger down between the back of the tongue and the back of the pharynx, and impossible to reach the glottis. There was no foreign matter to be felt. This state of affairs was very puzzling for a moment, but on turning the body on its face and palpating the back of the neck it was at once evident that there was displacement of the fourth cervical vertebra forwards to a very considerable extent. The body was at once removed, and attempt made to get a clear history of the accident. That was difficult to do in the midst of an excited crowd, some of whom were inclined to raise the question of foul play. I obtained an outline of the history at the time, however; and the police, by visiting a considerable number of persons during the night, were able to get details, all the different witnesses giving almost exactly the same story. The man had come into the shop very drunk, but able to talk, and had been shaved. He then made for the door, but some acquaintance waiting in the shop advised him to stay there, lest he might be apprehended as "drunk and incapable," for it was evident to them that he was getting more and more drunk every minute. He was led to "the waiters' bench," a long form, about fifteen inches high and nine inches wide, which was set close against a wall, and sat there for a short time till he fell off. He was helped up, apparently none the worse for that fall, and set upon the bench again with his legs stretched out straight in front of him, and his head hanging limply on his breast. In a few minutes he slipped forwards, without making any effort to save himself, and came down heavily in a sitting posture on the floor, his head being jerked back violently by the fall. He sat for a moment and then rolled over on his left side on the floor, "drawing his legs and arms up like one suffering from cramp" as he did so. He was allowed to lie, as those present thought there was no use setting him up so often, and he lay there for nearly two hours, till someone, coming in at the door and stumbling over his feet, drew attention to his stillness and pallor. I saw him a few minutes after that. No one had seen him move after the second fall. He had not vomited, and no one had noticed whether he was breathing or not while he lay on the floor. Next evening, with the aid of my assistant, Dr. James Muir, I made a post-mortem examination, which was a very imperfect one, for it had to be done in a small room, by dim lamplight, and in the presence of the dead man's brother. We made a longitudinal incision along the spine, and dissected away the soft parts on both sides. We found the fourth cervical vertebra displaced so far forwards as to allow my finger to freely enter the spinal canal in the fifth vertebra, the spinous process of the fourth resting upon the upper surface of the body of the fifth. The cord seemed to be completely divided. We felt the bones all round, but could find no evidence of fracture or of disease in the spines, transverse processes, or bodies of the vertebræ. No external marks of violence could be found on careful examination, except the slight bruise on the left temple and a doubtful one on the left side of the nose.

Whether this man died directly from the injury or from suffocation as he lay it would be difficult to say positively. It is well known that dislocation of the spine at this level is not necessarily immediately fatal, but the completeness of the displacement and of the rupture of the spinal cord may have caused death by shock. The "spasm" in which he rolled over on the floor suggests that he died at that time. I once saw an infant die instantaneously from an injury to the medulla oblongata or cervical cord, and it died with just such a spasm of the flexor muscles of the limbs. At all events, the appearance of this man's body did not suggest rapid suffocation as the cause of death. This case of fatal injury from a slight cause was made the more impressive to us from our having to examine next day a woman who had tried to commit suicide by jumping from a railway bridge, over 30 ft. high, on to the rails, but had fortunately sustained only a slight scalp wound and a thorough shaking.

Whifflet, Lanarkshire.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

ANEURYSM OF COMMON CAROTID ARTERY; LIGATURE OF ARTERY; RECOVERY.—EPITHELIOMA OF LIP AND OF PENIS IN A MAN AGED TWENTY-FOUR.

(Under the care of Mr. G. R. TURNER.)

THIS was a very large carotid aneurysm, probably from its rapid growth traumatic in origin; and although on the right side of the neck, the internal jugular vein lay slightly to the inner side and in front of the carotid artery at the point where the ligature was applied to the vessel. It is difficult to see how this anatomical abnormality could have been caused by the aneurysm, as the sac had by its inward pressure caused considerable displacement of the larynx. For more than three weeks after the operation the size of the aneurysm remained nearly the same. This inactivity was then followed by a most rapid shrinkage and hardening of the sac, and consequent return of the larynx to the middle line; so that six weeks after the operation the man's neck was quite normal in appearance. Mr. Turner intended to have used a kangaroo tendon ligature, but not being able to get one exactly suited he substituted a stout catgut one. For the notes of the cases we are indebted to Mr. Jervis.

CASE 1.—B. B——, aged twenty-nine (?), boatswain, a native of Manilla, was admitted to hospital on Dec. 11th, 1891. The history of the case is imperfect and the details doubtful, as no competent interpreter could be found. Previous history: There was a doubtful history of syphilis but no signs could be found. For about two months the man had had a rather rapidly growing swelling in the right side of the neck, which had lately caused cough, some difficulty in breathing, and very severe shooting pains over the right side of the head and face. An officer of the ship who brought the man up remarked, "The abscess is ready to be cut, as we have kept poultices on it for a week."

On admission a tumour about the size of a clenched fist was found occupying the right side of the neck. It

extended upwards to the angle of the jaw, and pushed the larynx about three-quarters of an inch to the left side of the middle line of the neck. Downwards it reached to within an inch and a half of the clavicle. Its maximum breadth was opposite the thyroid cartilage. The tumour was fluctuating externally but rather hard internally. There was well marked expansile pulsation and thrill, with a loud and harsh systolic bruit. Voice hoarse and cough brassy. He evidently had very considerable pain in the head. The pulse in the right temporal and facial arteries was distinctly smaller than on the left side. The tongue was protruded with its tip to the right. The pupils were equal, and reacted well to light. The laryngoscope showed redness and thickening of the right vocal cord, but movement was only slightly impaired. The heart sounds were normal.

On Dec 12th Mr. Turner made an incision in the usual direction but reaching right down to the sterno-clavicular joint. The fasciæ were divided and the omohyoid was seen at the extreme upper angle of the incision. The internal jugular vein presented, lying directly in front and to the inner side of the common carotid artery, which lay very deep. The needle was passed from within outwards and the vessel tied with a No. 6 catgut ligature. The wound was dressed antiseptically and was completely healed on Dec. 15th, no rise of temperature or discomfort occurring. Pulsation and bruit in the tumour ceased at once, as did the pulse in the right temporal and facial arteries. The retina (right side) was examined as the artery was being tied, but no alteration in the vessels was perceived. The pain in the head and the face was at once relieved and did not return. No cerebral symptoms ensued or lung complications. The tumour became slightly harder and but very little smaller till about between Jan. 4th and the 9th, when, without obvious cause, most rapid and perceptible shrinking and hardening began, until, on Jan. 31st, there was only slight hardness to be felt and no swelling to be seen. The larynx had returned to the middle line of the neck, and the cough, dyspnœa, and pain had all disappeared.

CASE 2. *Epithelioma of the lip and of the penis.*—C. F——, aged twenty-four, a French sailor, was admitted to hospital on Sept. 22nd, 1890. Parents living and healthy, also all his brothers and sisters. No history of malignant disease in the family. He was suffering from harelip and a warty growth on his lower lip, which had first appeared in April, 1890, and had been gradually getting larger. He had been accustomed to smoke clay pipes. The harelip was operated on and the epithelioma of the lip removed on Oct. 1st. Mr. Ritson, who has kindly furnished these notes, made a microscopical examination of the growth, and reported it to be distinctly epitheliomatous in character. It was now discovered that he had a similar growth on the penis, the existence of which he had hitherto concealed, and of which he gave the following history. He had first noticed in July, 1889, a small pimple about the centre of the sheath of the penis, which soon became ulcerated. He was in a hospital at Calcutta from October, 1889, to January, 1890, and was there treated by various caustics but without marked effect on the growth. In the following May (1890) he entered a New York hospital, where the growth was at once pronounced to be cancer, and removal of the penis recommended. He had refused to have the operation performed. There was no history of chancre or secondary syphilis. The sore on the penis was large and ragged, with hard, somewhat everted edges, chiefly on the dorsum and nearly surrounding the whole penis, commencing about half an inch from the end and extending to about the same distance from the root. There was no marked enlargement of the inguinal glands. He was treated by local calomel fumigation and general antisyphilitic treatment, but without deriving any benefit. Although he would not give his consent to amputation of the penis, he was willing to have the growth itself removed. This was done on Oct. 28th, and involved the removal of a considerable part of the penile coverings. The corpus spongiosum and corpora cavernosa were luckily not invaded. The operation wound healed rapidly, with healthy granulation. The man left the hospital apparently well on Dec. 31st, 1890. He was told to report himself at once on any recurrence either on the lip or penis, but has not been seen since his discharge.

Remarks by Mr. TURNER.—It is rare, I think, to find epithelioma in two places so remote from each other as the lip and penis, in a man, too, as young as twenty-four. Both clinically and microscopically there could be no doubt as to the nature of the growths. The negative result, too, of syphilitic treatment further corroborated the diagnosis.

DEVON AND EXETER HOSPITAL.

A RAPIDLY FATAL CASE OF ULCERATIVE ENDOCARDITIS.

(Under the care of Mr. ARTHUR GOULSTON and Dr. ARTHUR G. BLOMFIELD.)

THE case of ulcerative endocarditis related by Mr. Goulston and Dr. Blomfield is a further useful contribution to the already abundant literature of this obscure and fatal affection. The symptoms of which the patient complained were severe and general, the cardiac phenomena, as is often the case, being subordinate to those of systemic infection. The hyperpyrexia, combined with the characters of the urine, were suggestive of a septicæmic process, which was confirmed next day by the appearance of a universal dusky rash. The presence of an apical cardiac bruit, together with a past rheumatic history, served to indicate its possible origin. The rapid onset of hemiplegia was no doubt due to lodgment in the cerebral vessels of portions of the disintegrating necrotic vegetations. It was no doubt difficult to distinguish the case at first from rheumatic hyperpyrexia, but the limited necropsy quite bears out the diagnosis of ulcerative endocarditis. As has been observed in some instances previously, the acute process in the heart involved the auricular endocardium rather than the mitral valve-cusps themselves, the auricle exhibiting three ulcerating surfaces covered with typical exuberant necrotic granulations. The exciting cause of the acute and fatal attack remains obscure. Dr. Coupland[1] has published an interesting series of these cases, in which he drew attention to the irregular and pyæmic type of the pyrexia, which in one instance was so strikingly periodic as to nearly simulate intermittent fever. In 1885 Dr. Osler of Philadelphia delivered his classical Gulstonian Lectures on this subject; he collected a large mass of facts and divided the various classes of cases into clinical groups. As to terminology, there has been, and is still, great difference of opinion. Dr. Coupland, in the communication before referred to, uses and defends the term "malignant" as applied by Virchow to the graver form, and he shows that a case of ulcerative endocarditis must have another element superadded to it to produce the peculiar malignant clinical type. Dr. Sansom, in discussing this subject later,[2] preferred to apply to those aberrant forms which presented grave clinical symptoms the term "severe" endocarditis; while Dr. Stephen Mackenzie, on the same occasion, thought the term "essential endocarditis," while taking no cognisance of its etiology or pathology, would meet the clinical requirements of the case. In Dr. Sansom's paper will be found, not only a *résumé* of the bacteriology of the subject, but also some very valuable considerations as to treatment. He advocated strongly the plan of administering the sulpho-carbolate of sodium, or other suitable antiseptic, in sufficient doses in these cases, and Dr. Mackenzie also thought he was able to report a favourable result after the administration of benzoate of sodium. Cerebral embolism often occurs in these cases, contributing to the rapidity of a fatal result. An interesting case in this connexion has been placed on record by Dr. Ormerod,[3] in which the hemiplegia was not absolutely sudden in its onset. This, as he there suggests, was probably because the obstruction from the embolus was incomplete, and secondary thrombosis was necessary to seal the vessel absolutely.

R. S——, aged twenty-one, single, has had rheumatic fever twice, the last attack being four years ago. It was quite a mild one, but since then she has never been able to go upstairs without attacks of breathlessness. For about a week before May 5th she had felt unwell, having to give up her work as a domestic servant, and on May 9th Mr. Goulston was sent for. At his visit he found her complaining of general malaise and weakness, with pain

[1] Medical Times and Gazette, Feb. 25th, March 18th, April 1st, and April 29th, 1882.
[2] Medical Society of London, Feb. 22nd, 1886.
[3] St. Bartholomew's Hospital Reports, vol. xxvii., p. 41

down the middle of the back, and stiffness and pain on movement in the muscles at the back of the neck. Much headache, a furred tongue, constipation, scanty high-coloured urine, sp. gr. 1020, acid, with distinct trace of albumen. The skin was dry and burning; the temperature was 105° F.; the pulse 140, soft and compressible, and respiration 25. The liver was somewhat tender on pressure, but the spleen was not apparently enlarged. A loud systolic murmur was heard at the apex of the heart. The heart was enlarged, and there was also a thrill to be felt over the apex. On May 10th the face was flushed, and there were dark rings round the eyes, a general dusky erythema of the whole body, and severe pains in the back of the neck, and there was some delirium. Temperature 105°. The same evening she became worse, delirious, and very talkative. Temperature 104°; pulse 120; urine scanty. On May 11th the temperature rose to 105°; pulse 140; increasing delirium, and trying to get out of bed; sweating profusely. On this day Dr. Blomfield saw her with Mr. Goulston, and it was agreed that with the history of previous rheumatic attacks her condition was one of hyperpyrexia, and Mr. Goulston suggested ulcerative endocarditis. On the same day she was removed to the Devon and Exeter Hospital and treated without success by the wet pack; but she became worse, and at 10 P.M. had an attack of left hemiplegia with tonic spasm in the right arm and leg. From this condition she did not rally, but died the same night.

For the post-mortem notes we are indebted to Mr. Martyn and Mr. Andrew, house surgeon and assistant house surgeon, Exeter Hospital. Permission only was granted to examine the heart, which was enlarged. With the exception of the mitral valve, which was thickened by old endocarditis, the valves were healthy. Just inside the left auricle, and close to the mitral valve, were three soft ulcerating surfaces covered by prominent granulations. The body was decomposing rapidly, although death had only occurred twenty-four hours previously.

Remarks by Mr. COULSTON and Dr. BLOMFIELD.—We venture to report this case because the diagnosis of ulcerative endocarditis is by no means certain. The collective symptoms are often vague and liable to be mistaken for those of tuberculosis, typhoid fever, chronic pyæmia, ague; and, with the late epidemic of influenza fresh in our minds, possibly also with that disease. The patient had had two attacks of rheumatic fever before her fatal illness, and therefore in this case the ulcerative condition was secondary to chronic valvular disease; the why and wherefore remain a mystery.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Ectopic Pregnancy.—Hysterectomy.—Growth of the Placenta after death of the Fœtus in Ectopic Gestation.

A MEETING was held at 20, Hanover-square on the 1st inst., Dr. J. Watt Black, President, in the chair.

Mr. LAWSON TAIT read a paper on a case of Ectopic Pregnancy in which the fœtus seems to have been developed to the full time in the peritoneal cavity, still retaining its amniotic covering. The patient, aged thirty-six, had two children, the last three years ago; no miscarriages. Her last period was in the middle of July, 1890; then she saw nothing till May 20th, 1891, and during that period has been getting larger, has had morning sickness, and milk appeared in the breasts in February, 1891. In September, 1890, she is said to have had "inflammation of the covering of the bowels," and was in bed a month. She first felt the child move about Christmas, and in January she fainted whilst dressing, and had to be carried to bed. She then had pains like labour. These gradually passed away, and at the end of a week she got up. All fœtal movement ceased suddenly on May 8th, and from then till October she noticed she got considerably smaller round the waist. On examination, the uterus was only slightly enlarged, but filling up the pelvis was a large globular, tender, boggy mass. On abdominal palpation a large movable mass was felt, in which distinct parts of the fœtus were detected. Abdominal section was performed on Oct. 12th; the umbilical cord ran down to the pelvis, and was inserted into the boggy mass felt there. The child was lying loose in the abdomen, except that all its upper surface had become adherent to the omentum and to the anterior parietal peritoneum. The child was enclosed in its membranes, but the liquor amnii had disappeared. The placenta peeled out of the pelvis easily, and was found to come from the right Fallopian tube. The patient made an uninterrupted recovery. From the history and specimen removed, Mr. Tait thought the patient became pregnant in July, and then in September, at about the tenth week of gestation, the tube ruptured, giving rise to what was called by her medical man "peritonitis"; the fœtus in the amnion was extruded entire through a rupture in the Fallopian tube, and the entirety of the placenta retained in the tube. The case proves that a living fœtus at ten weeks of age can resist the digestive powers of the peritoneal cavity if the amnion be unbroken. The case explains one of the varieties of so-called "abdominal pregnancies," and probably indicates the true solution of all the cases of this variety.—Dr. HORROCKS asked whether Mr. Tait advised operation as soon as the diagnosis of extra-uterine gestation was established, or whether he recommended waiting until the child was dead or until the full period of gestation had passed. His own experience was in favour of operating as soon as the diagnosis was made, whether the child was viable or not.—Dr. GRIFFITH inquired how Mr. Tait explained the direct adhesions of the omentum and abdominal wall to the fœtus itself, with the amnion sac remaining intact, and pointed out the great difficulty in defining the limits of the tubal wall from other constituents of the wall of the sac, even at so early a period as the fourth month. He did not think the evidence given that the placenta was entirely in the tube at all conclusive; it certainly was most improbable.

Mr. LAWSON TAIT also contributed notes of two cases of Hysterectomy. The first patient was fifty-two years of age, had ceased to menstruate two years ago, and during the two months before Mr. Tait saw her the tumour had grown more rapidly. It reached up to the sternum, and pseudo-fluctuation was distinctly present. When the abdomen was opened the tumour was seen to be a myoma, and fluctuation was so distinct that a trocar was plunged in and six pints of fluid removed. The tumour (which weighed about 5lb.) was clamped and removed. The patient made an uninterrupted recovery. The second case was that of a woman aged forty-two, who had had three children, all the labours being normal. When thirty-seven years old she began to lose profusely and then noticed a substance in the lower abdomen. A large multi-nodular myoma reaching above the umbilicus was found on admission, and the appendages were removed on May 13th, 1888. She reported herself on July 26th, 1890. Menstruation had not recurred, and she felt perfectly well. The tumour was found to have nearly disappeared. Later on metrorrhagia recurred, the uterus was explored for polypi, but none were found, and the endometrium was curetted, with temporary relief. The discharge came on again, and the tumour had again increased in size; so on Oct. 12th, 1891, hysterectomy was performed. The old multi-nodular myoma was hardly to be seen, but a large independent growth of a soft œdematous character had grown to the size of the original tumour. The patient made an uninterrupted recovery. The case was a unique example of a soft myoma springing up after a multi-nodular one had been removed, and Mr. Tait considered that whilst the latter variety of myoma is a disease of menstrual life, the former is not so.—Mr. ALBAN DORAN believed that the œdematous fibroid of women who had reached the menopause or passed that epoch was a special form of tumour. Œdematous fibroid in the sense of œdema of an ordinary fibroid from definite causes was quite another kind of disease. Thus a partly impacted tumour was sometimes removed by operation. A few hours after its removal it would be found shrunken to half its size; the impacted tumour had caused true œdema, which of necessity disappeared for mechanical reasons after the knife had passed through the tissues of the tumour. The "œdematous fibroid" of the menopause was often unaccompanied by any visible cause of œdema; its vessels might be seen passing between its surface and its capsule free from any sign of pressure without or plugging within, whilst its entire mass lay free from any severe pressure in the abdominal cavity above the pelvic brim. These tumours did not lose much by draining off their fluid after removal, though, like all soft tumours, they shrank when immersed in spirit.—Dr. DUNCAN asked

whether the fluid removed had been examined chemically, also whether the lining membrane of the cyst had been microscoped, as it was known that some of these œdematous fibroids owed their condition (as Virchow had shown) to dilated lymphatics.—Dr. HORROCKS said that in all probability the word "fibroid" included a group of different tumours. We already knew of differences in the clinical histories of these tumours, and no doubt there was a difference in their pathology. In his own experience he found the ordinary hard fibroid a non-malignant tumour, which but rarely caused death, and then only by accident as it were. These tumours might become œdematous, as Mr. Doran had observed, but the œdema was different from that of the so-called soft œdematous myoma.—Dr. HAYES could not accept the conclusion arrived at from the report of the second case. Precise details were wanting. Abdominal tumours had an odd habit sometimes of disappearing and reappearing under the ken even of competent observers. Mr. Tait's teaching for a long time back was clear—viz., removal of the uterine appendages in the case of the hard myoma was frequently followed by its shrinking or disappearing, but in the case of the soft fibroid the operation was valueless. He would now have us believe that not only will the hard myoma shrink, but the soft myoma will originate and grow after the removal of the uterine appendages. He (Dr. Hayes) thought Mr. Tait was mistaken in that the softer fibroid was present when the first operation was performed.—Dr. LEITH NAPIER remarked on the different degrees of hardness found in myomata. Doubtless imbibition of fluid and inflammatory changes in the capsule accounted for conditions differing widely from the degree of hardness generally met with; but if we regarded certain of these soft œdematous fibroids as examples of myxo-fibromata, and recognised that degenerative cystic changes in these might originate general softening in some cases, and in others cause larger cysts to form, it would be a nearer approach to what seemed the true pathology. It was extremely difficult to draw clear distinctions between a soft œdematous fibroma and a true myxo-fibroma. He mentioned a case in which abdominal section was performed in order to remove the uterine appendages, but when the abdomen was opened the central portion of the tumour was found soft and fluctuating, having undergone mucoid degeneration, so that hysterectomy was considered advisable.—Dr. GRIFFITH said there were three well-recognised conditions which may cause enlargement of fibroids after the climacteric—first, simple œdema; second, liquefaction of the constituent muscle cells and connective tissue leading to the formation of large and small irregular, cyst-like cavities, with ragged walls, and generally associated with calcification of other parts of the tumour; and third, the development of true cysts with a smooth glistening wall, but usually without an epithelium. There is a comparatively rare form of soft fibroids which grows much more rapidly than the usual kind, and which contains a large amount of what appears to be lymphoid tissue. All these forms he had exhibited at meetings of this Society, with microscopical sections.—Dr. LEWERS thought that some tumours were included under the name of "fibroid" that had an entirely different clinical history and pathology from the common variety. He had seen two cases in point, where there were large uterine tumours composed of a large number of small cysts separated by fibrous tissue. In neither was there menorrhagia, nor was the length of the uterine cavity increased, though in one of the cases the tumour reached up to the epigastrium. In this case the menopause had occurred a year previously; in the other the patient was a young woman about twenty.

A paper on the Growth of the Placenta after Death of the Fœtus in Ectopic Gestation was next contributed by Mr. LAWSON TAIT and Dr. C. MARTIN. A patient was sent to Mr. Tait with this history: She was twenty-eight years of age, and had had one child two years before. Two months before being seen by Mr. Tait, after having seen nothing for seven weeks, she was suddenly seized with acute pain in the left lower abdomen. Protracted syncope set in, and then the temperature went up, and for some days the abdomen became extremely tender. A fortnight later she was again seized with acute pain, followed by syncope, pyrexia, and general abdominal tenderness, which was most severe in the left iliac region. On examination the uterus was large, irregular, and somewhat fixed, and a firm, tender mass was to be felt to the left of it. There was no history of the passing of decidua, and the patient had no idea she was pregnant. When the abdomen was opened it was found to contain a quantity of old and recent blood-clot. The right appendages were adherent, but otherwise normal. The left Fallopian tube was the seat of an ectopic gestation, and when removed was the size of a large orange. There was a considerable rent in one side of the tube, and on splitting open the gestation sac there was seen to be a small cavity lined with amnion, and containing a very little liquor amnii. Sessile on this amniotic cavity, there being no umbilical cord, was a small fœtus less than an inch in length, much flattened, shrunken, and macerated. The greater part of the gestation mass was composed of placental tissue, infiltrated to a very slight extent with blood-clot. Microscopical sections by Dr. Martin proved that this mass was placenta, and not blood-clot. The authors thought the interesting point of the case was that the placenta had gone on growing after rupture of the tube and death of the fœtus, for it far exceeded in amount that which is normally present with a fœtus in so early a stage of development. The placenta was that of a four months' pregnancy, while the fœtus was only seven weeks old. They thought the case proved conclusively that the placenta, after the death of the fœtus, may in some cases go on growing and be a source of disaster to the patient; for had the pregnancy not been removed by operation, the patient would no doubt have been subject to a third attack of rupture and syncope, and possibly would have succumbed from internal hæmorrhage, and this in consequence not of the continued growth of the fœtus, but of the placenta.—Dr. GRIFFITH first inquired if Mr. Tait, in describing growth of the placenta, referred to the fœtal or maternal, or both portions. [Mr. Tait replied *fœtal only.*] Dr. Griffith then stated what a difficult task was attempted by those who held similar views—namely, to satisfy themselves at least that the fœtal placenta a part of the fœtus continued to grow after the fœtus itself was dead. It must be remembered that there is greater variety in size in extra-uterine even than in intra-uterine placentæ, and very large ones were well known in cases in which post-mortem growth was impossible. Again, we ought to have undoubted proof of intra-uterine post-mortem growth in cases where the chorion remains attached to the uterus for some weeks; but all the evidence on this point is certainly against the occurrence of any such growth. The cystic degeneration referred to as evidence cannot be accepted in the face of this fact; besides enlargement of villi due to such degeneration is not growth.—Dr. HORROCKS believed it possible for the chorionic villi or placenta to grow after the death of the fœtus. He thought it would be difficult to account for the relative smallness of the fœtus in certain cases of both intra- and extra-uterine gestation on any other hypothesis. When the fœtus was dead it could get no nutrition for itself, owing to the cessation of the circulation, but the chorionic villi were in a different position. They were embedded in maternal structures, and it was not very conceivable that they might derive nutrition from the vessels of these structures, but it was quite certain that they did so in the case of hydatidiform degeneration, where there was great increase in growth, the nutrition for which must come from the maternal vessels, inasmuch as the fœtus was in most cases dead from quite an early period of gestation. He mentioned a case in which he had operated where the fœtus had died so early as to be undiscoverable, and yet where the tumour had continued to increase in size apparently by growth of the chorionic villi.

The following specimens were shown:—

Dr. MALINS: (*a*) Ruptured Extra-uterine Gestation; (*b*) Hæmato-salpinx.

Dr. CULLINGWORTH: Unruptured Tubal Gestation.

Dr. WHEATON: Microscopical Sections of (1) Polypoid Growth from an Infant's Umbilicus; (2) Fibroid Tumour; (3) Endometrium of an Eight-month Fœtus.

Mr. J. R. RADCLIFFE: Uterus Bicornis.

EPIDEMIOLOGICAL SOCIETY.

MAY 18TH.

Dr. JOSEPH EWART, President, in the chair.

The Seasonal Prevalence of Enteric Fever in London.

A PAPER contributed by Dr. Louis Parkes, under the above title, was read by the Secretary in the absence of the writer. He began by saying that the reduction in the death-rate from enteric fever in London from 337 per

100,000 in the earlier to 150 or 160 in the later years of the period 1870 to 1890—i.e., since it had been officially distinguished from other forms of "fever" observed throughout the country—was doubtless due no less to better domestic sanitation, especially in the dwellings of the poor, than to the improved water-supply and sewerage, which had been for some years previously practically the same as since. But he would confine his observations to London, the enormous population of which minimised the disturbing effects of local outbreaks due to accidental causes, and where the largest aggregation of persons living under nearly identical conditions was to be found, his purpose being to inquire into the relations, if any, between the greater or less prevalence of the fever and the special meteorological conditions and rainfalls of the different years. More exact information would in the future be available through the notification of cases, but the death-rate of enteric fever showed so constant a curve that it was easy to determine the average number each week over a long series of years, and drawing a base line for the mean to represent the percentage of weekly excess or defect; while the duration of the disease and of the incubation period being known one could infer the season of greatest activity. The curve, as drawn by Buchan and Mitchell, showed a rise from its lowest point at the end of June, crossing the mean in August, suddenly rising in October to its maximum, falling slowly in November, rapidly in December, recrossing the mean line in January, and, with the exception of short rises in February and March, sinking continuously till the end of June; the highest point being 40 per cent. above, and the lowest 30 per cent. below, the mean. A temperature above 60° F. being as a rule necessary for the development of the highest degree of virulence in the enteric bacillus, whether in the soil or water, it was but natural to expect that, as Dr. Murchison had maintained, the hottest seasons would be the years of greatest, and the coldest of least, prevalence. Hot seasons were mostly dry, and wet ones cold, but heavy rains, the weather being warm, might pollute wells in rural districts or flush the sewers in towns, which would explain the discrepancies between the actual prevalence in London and the provinces and the temperature in certain years. Giving three weeks for the incubation and the same for the duration of fatal cases, its greatest activity would be in September. The highest temperature of the soil was indeed reached some three weeks earlier, but the interval represented the period of development and general diffusion of the bacilli, which retained their activity for some months after the temperature had begun to fall, the effect of cold being far less marked on enteric fever than on diarrhœa. He showed a series of tables in which the years were arranged in order of the temperature, the rainfall, and the prevalence of fever in the last twenty weeks of each; and another in which they were grouped as A, years conforming well to the rule which asserted a relation between the prevalence of enteric fever in the autumn and the temperature and rainfall of the preceding summer; B those conforming approximately to this rule; and C those not conforming thereto either (1) of low summer temperature, but much autumnal fever, and (2) of high temperature and little fever. Under A were included 1887, 1873, and 1888. Under B 1877, 1886, 1874 1880, 1875, 1882, 1876, and 1885. C (1) included 1881, 1889, 1883, 1871, and 1879; and C (2) 1870, 1878, 1884, and 1872. The ascending curve crossed the mean line in July in three years—viz, 1870, 1884, and 1886, so that the autumnal excess of deaths was really greater than shown by the last twenty weeks only, and 1870 and 1884 were more conformable to the rule than they appeared to be; but the temperature of these summers was not exceptionally high. In eight years it crossed in August, in eight in September, and in one early in October. No positive conclusions could be drawn from a series in which the exceptions were nine and the examples of the rule eleven; but this was probably explained by the equability of our climate, the mean summer temperature of the hottest, 1887, having been only 5° F. above that of the coldest, 1879, and its maximum 8·6° above the mean of the maxima. Even 1881, with the enormous mortality of 74 per cent. above the mean of the twenty weeks, was a year of average temperature, and with a rainfall for that period of only one inch in excess. The differences in the rainfalls were much greater, but did not seem to exert any marked effect on the mortality. There were, therfore, he believed, other influences to be investigated, some favourable and others antagonistic, which in this country served to conceal the influence, however real, of temperature and rainfall on the seasonal prevalence of enteric fever.—Dr. LONGSTAFF, criticising the paper, said that Dr. Parkes had not taken the best means for arriving at a sound conclusion in assuming that all other conditions were alike throughout the period of twenty years, for the maximum mortality from nearly all fevers was in 1869, and there had been a general decline to a minimum within the last few years. Dividing the period in question into three—viz., the ten years 1869–1878, the six 1879–1884, and the seven 1885–1891,—the mean annual deaths in each were: from typhus fever, 293, 63, and 15; from scarlatina, 347, 117, and 50; and from enteric fever, 903, 893, and 602 per 100,000. During the first of these periods enteric fever was nearly stationary, while the others were declining as rapidly as in those that followed. The maxima were: for typhus fever, 716 in 1869; for scarlatina, 615 in the same year; and for enteric fever, 1069 in that and 1033 in 1878, or the last of the first decennium; while the minima were: for typhus fever, 8 in 1891; scarlatina, 35 in 1888; and enteric fever, 538 in 1889. The identity of the curves, irrespectively of the actual number of cases in any year, showed that season had a positive and real influence; while the decline in all fevers, though extending over different periods, proved that factors other than meteorological—perhaps social conditions no less than sanitary improvements—were also at work. These were facts that could not be gainsaid, however unable we might be to explain them. The "mean temperature" of the year or season was worthless; far better would it be to take the number of "hot" and "cold" days in any period, understanding by "hot" days those in which the mean temperature was over 60°, or preferably 62°, and by "cold" under 34°.—In reply to Dr. Pringle, Mr. MURPHY admitted that there was more enteric fever among the populations supplied with Thames water than in the district of the Kent Company, but that water was not the only factor, and the social conditions of Whitechapel and of Blackheath were very different.—Dr. WILLOUGHBY remarked that Dr. Parkes had discussed the factors of temperature and rainfall in the current and preceding years, but had wholly ignored their resultant, the level and fluctuations of the ground water, the influence of which on the soil poisons of enteric fever, cholera, and diarrhœa was undoubted; and which, as Pettenkofer had shown, explained the prevalence of the same disease at different seasons in different places, especially of cholera in Europe in the warm, and in India—for example, Calcutta—in the cool season. The connexion between meteorological conditions and the spread of scarlatina was far more difficult of explanation, yet its seasonal prevalence was at least as clearly marked, and what was most remarkable, the curves of mortality from scarlatina in London and in New York, though equally constant, were the converse of each other. These were problems that were capable of solution if we could but discover the factors, since they were evidently the result of laws and not of chance.

Notices of Books.

Essentials of Bacteriology: being a Concise and Systematic Introduction to the Study of Micro-organisms for the Use of Students and Practitioners. By M. V. BALL, M.D., late Resident Physician, German Hospital, Philadelphia; Assistant in Microscopy, Niagara University, Buffalo, New York. With Seventy-seven Illustrations, some in Colours. Philadelphia: W. B Saunders. 1891. — This little book contains in a very condensed form much of the information that is required by the student of bacteriology. It gives the more recent methods, keeping very well up to date in this respect, but does not always give them sufficiently definitely or fully to enable one who is ignorant of bacteriology to make use of them, though it must be said that in most instances this is not the case. A short and accurate account is given of the more important pathogenic and non-pathogenic organisms. Yeasts and moulds are treated of, the hæmatozoa of malaria are considered along with the bacilli that are described in that disease, and then a short account of the examination of air, soil, and water is given. Altogether this is a useful

little book for the student of bacteriology who has not much time to devote to the more elaborate descriptions given in the larger text-books. We are sorry for Dr. Dixon's sake that the author again puts forward a claim to priority as regards Koch's method of treating tuberculosis, as anything published by Dr. Dixon previously to Koch's published statements was so exceedingly sketchy, so general and theoretical, and in some cases manifested such a very crude knowledge of certain bacteriological facts, and contained so little definite information, that we should have thought that this matter had been better left in the background. We should also like to draw attention to the fact that the source of some of the drawings contained in this book is acknowledged, but in many instances no such acknowledgment is made, at least five drawings being taken from one source without that source being mentioned, although two others taken from the same book are acknowledged. This holds good in several other cases, though we have taken the trouble to look up one book only for the complete set. It would be far better to allow students to refer to the original sources in all cases, and would certainly not detract in any way from the merit of the work.

THE March number of the *Journal of Comparative Pathology and Therapeutics* contains several very interesting pathological papers. One on Pyæmic Umbilical Infection in Foals by W. Gmelin is of considerable importance. It is pointed out that foals succumb to pyæmia at an average age of about twenty-six days, that the disease becomes apparent about the seventeenth day, and that the peritoneum is very frequently not affected. The essentials for treating this condition are cleanliness immediately after birth and the continued use of antiseptic methods. An important paper by Professor M'Fadyean on the Virulence of the Blood and Muscles in Tuberculosis would lead us to conclude that both blood and muscles of tuberculous animals, except where the tuberculosis is very extensive, are innocuous. Of eighty-four experiments recorded, Professor M'Fadyean thinks that only fifty-five can be accepted as unobjectionable, and of these fifty-one gave negative results; in the remaining four only was there any evidence that tuberculosis followed inoculation with meat juice; and Professor M'Fadyean points out that some even of these positive results may be due to experimental error. Dr. Hunter's contribution to the discussion on Phagocytosis and Immunity is here published; an account of an Interesting Abnormality in a Fœtal Lamb is given; and Messrs. George R. Murray, B.A., M.B., and Clement Stephenson, F.R.C.V.S., contribute a paper on Swine Erysipelas, which is supplementary to Professor M'Fadyean's paper on a similar subject published in the December number of this journal. Other interesting items are "the prevalence of tuberculosis amongst cattle in Great Britain," "on an anthrax carcase sold for human food," and "on tuberculosis in the sheep and goat"; whilst the abstracts and reports should prove of considerable interest to both the clinician and the pathologist. This number is certainly one of the most interesting we have read for some time.

THE June number of the *Veterinarian* opens with a communication from Mr. D. E. Salmon and Dr. Theobald Smith on the Relation of Texas Fever and Cattle Ticks, from which we gather that the "red water" or "hæmoglobinuria," which in this country has also been said to be due to the infection of cattle through a tick, is probably identical with Texas fever; and it is probable that Principal Williams's ideas on sheep-tick as a carrier of infection in "Trembles" may have suggested this line of research. In the same number Mr. William Littlewood maintains that the fly disease of camels is really a kind of hydatid disease, and that the ova of the tænia echinococcus are ingested by the camels from drinking water. The remainder of the number is devoted to reports of meetings of the Royal College of Veterinary Surgeons and the various veterinary associations. One feature discussed this month is the extension of the time of study for the veterinary diploma, and it is considered that in the present state of veterinary science and practice four years is quite a short enough time for the thorough training of veterinary students, it being pointed out that such a prolonged period is even more necessary here than in the case of the medical student who has to deal with one animal only. There is also given a short account of the meeting of the colleagues, friends, and pupils of Professor M'Fadyean of the Royal Dick Veterinary College, Edinburgh, at which he was presented with a testimonial on the occasion of his appointment to the Professorship of Comparative Pathology in the Royal Veterinary College, London.

THE *Veterinary Journal and Annals of Comparative Pathology* for May contains a number of accounts of tumours in the horse and dog and an editorial article on Instruction in Horseshoeing. The remainder of the journal is devoted to reprints, notes, translations, and accounts of the meetings of various veterinary and agricultural societies.

Chemical Calculations. By R. LLOYD WHITELEY, F.I.C. London: Longmans, Green, and Co. 1892.—Chemical arithmetic affords not only an excellent exercise to the chemical student, but is also a means oftentimes of fixing in his memory many essential facts, while to be able to solve chemical problems is, of course, a qualification that is required of every practical and theoretical chemist. The little work before us (100 pp.) contains a very fair selection of problems, with explanatory notes and key. The calculations are clearly and concisely explained, and the student is materially assisted by well-chosen examples in each section. Moreover, the methods described are up to date, that of Raoult's for the determination of molecular weights by the depression of freezing point, for example, being treated of sufficiently in Chapter XIII. to enable the student to make approximate but instructive determinations for himself.

Laboratory Practice. By J. P. COOKE, LL.D. London: Kegan Paul, Trench, Trübner, and Co., Limited. 1892.—The author of this work is Erving Professor and Director of the Chemical Laboratory, Harvard University, and we cannot help thinking that his book must be better suited to the requirements of students across, rather than to those on this side of, the Atlantic. Apart from the fact that here we are favoured with a whole host of similar manuals, the book does not appear to offer any extraordinary facilities to the student. On the contrary, we think it contains several statements calculated to puzzle him. On p. 15, for instance, he will read that certain hand scales, costing in Germany 2.37 dollars, are well adapted for all the experiments described. And again, on p. 23, the author says that for the purpose of certain experiments thermometers such as are sold in Germany for eighty cents are required. If the apparatus the student is to experiment with are to be obtained only, as he is apparently instructed, in Germany, and at a price represented in dollars or cents, he may not unreasonably be expected to give up the practical study of the science in despair. The only illustration in the book is devoted to a kerosene stove and furnace called the "Chemical American," "which is well adapted for all the chemical experiments described." We are not familiar with this probably useful stove; and still less do we know what is meant by "a half pint tincture of thin glass" mentioned on the opposite page. Notwithstanding all this, we like the general plan of the work, as we think it is calculated to assist the student with his theoretical work, but in its present form we can only recommend it to the notice of American readers, for whom, doubtless, it was originally intended.

THE LANCET.

LONDON: SATURDAY, JUNE 25, 1892.

AS medical journalists, we hold aloof from the strife of parties, reserving our sympathies for whatever political organisation is truest, for the time being, to that best of all programmes, "Salus populi, suprema lex." As citizens, we exercise our right of private judgment and give our "vote and interest" accordingly. In this latter sense the profession takes as keen and as intelligent a part in public affairs as any body of men in the community. "Every man," said COLERIDGE, "is by nature a Parliamentarian or a Royalist, a Whig or a Tory, a Liberal or a Conservative," and the remark has its justification in medical annals no less than in those of parallel callings. THOMAS SYDENHAM, "the English HIPPOCRATES," was all for Puritan and Parliament; WILLIAM HARVEY, "the COLUMBUS of physiology," ranged himself with King and Cavalier; JOHN ARBUTHNOT, who, SWIFT sarcastically observed, "knew his art but not his trade," according to SAMUEL JOHNSON was an ideal Jacobite and High Churchman; RICHARD MEADE, "the great and good," would have died for the Hanoverian dynasty and the Protestant succession. Late in last century, medicine gave to Whig politics the vindicator of the French Revolution, Sir JAMES MACINTOSH, and in the first half of the nineteenth it gave to Toryism Sir ASTLEY COOPER and Sir ROBERT CHRISTISON, and to advanced Liberalism, long before such Liberalism was fashionable or even safe, THOMAS WAKLEY. Equally with every other vocation in life that of the healing art is divided in politics, and, if it has hitherto contributed comparatively few representatives to Parliament or office, the explanation is to be sought in a sense of duty honourable to itself and to its professional ideal, certainly in no incapacity for dealing with affairs or for enlightened and philanthropic legislation. Of late years the medical profession, more than any other, has undergone profound and far-reaching developments. It is enrolling in its ranks an ever-increasing number of votaries who adopt its education as the most humanising the age can offer—men who assume its qualifications with no fixed intention to practise, but simply as a guarantee of culture and of humanistic knowledge available in careers hitherto not opened up. The vast domain of public health—the hygiene of the social organism—affords one of those outlets for medically trained ability and enterprise, whether in sanitary engineering, in hospital extension and administration, in food protection, or in the wide and eminently debatable field of preventive or prophylactic medicine. Add to this the number of duly qualified practioners who retire at an age still compatible with sound and active headwork not only in municipal and social, but even in Imperial departments, who have much valuable knowledge, experience, and capacity to put at the disposal of the State, and who only require the opportunity to give direction and practical force to national legislation, and we have established a case for the accession to Parliament of a medical representation hitherto—if not entirely excluded—at least unduly denied its proper numbers and weight. Long before the appearance in contemporary civilisation of this ever-multiplying contingent of non-practising medical men, or of emeritus-practitioners still in the prime of their mental energies, we have had evidence, mainly, it is true, from abroad, of the value of such representation in national Legislatures. Continental Parliaments can point to medical statesmen not inferior to those sent forth from the traditional sources of political supply. A VIRCHOW in Berlin, a LANZA and a BACCELLI in Rome, a RIBERO in Madrid, have added to the deliberations of the Lower Chambers of Germany, Italy, and Spain a capacity for affairs, a power of conceiving and carrying out salutary innovations, to which these countries owe much of whatever prosperity or advancement they can boast; while in their Upper Chambers or Senates the infusion of distinguished physicians and surgeons is still larger and more effective, so as to give outline and colour, body and direction to legislation which, but for such an element, would be proportionately less sound, less practical, and less complete.

In all Parliaments there has too long been a plethora of the legal or forensic calling. In days when the gift of public speech or of dealing with private or public interests was supposed to be a peculiar possession of the barrister or practising lawyer, there was some reason for such a preponderance of that profession in the Legislature. But these days are past, and the "gift" in question is shared in due proportion and effectiveness by other professions—not least by the medical. Practice gives proficiency; and we are sure that to many a retired professional brother or medically trained man of means and leisure the opportunity only is wanting to evoke from him an amount of useful Parliamentary work hitherto looked for in vain from the traditional member of Parliament. We hope, therefore, to see in the general election now imminent a strong contingent of such candidates; and we know that all parties in the State can point in their ranks to men of the type we mean—men able, willing, and ready to put themselves in nomination for constituencies of their own political colour. But there is no time to be lost. Seats where the sitting members or adopted candidates are unopposed are daily becoming fewer and fewer. The ambitious barrister or the monied aspirant to social position are already in great force at the front, and the less pushing and more truly public-spirited candidate is in danger of being elbowed aside or relegated to a "back seat." The constituencies themselves are deeply interested in the quality of their representatives; but in many cases they are driven to put up with what they can get. Let it be from no fault of the profession, abounding as it does in eligible candidates, if the area of choice is too restricted and if representatives of the notoriously familiar type are returned, to the exclusion of men whose culture, whose experience, whose sympathies, and whose capacities have led them to the adoption of such watchwords as "Sanitas sanitatum, omnia sanitas," or its practical culmination, "Salus populi, suprema lex."

A PAMPHLET which has recently been issued, entitled "The Bird that laid the Vaccination Egg,"[1] well exemplifies

[1] P. S. King and Co., 5, King-street, Westminster.

the present phase of so-called "scientific" opposition to vaccination; indeed, its author, Mr. J. H. LEVY, gives to his paper the alternative title, "An Excursus on Scientific Authority." The burden of the story is a curious one, relating as it does to a point in the natural history of the cuckoo. Assailing, in the first instance, the "brutally enforced doctrine" which is based on JENNER'S discovery, and quoting Dr. CREIGHTON on what the latter terms this "nonsensical" doctrine, together with his sarcastic reference to "the standard of logic in the medical profession," the author proceeds to show that the success of JENNER'S theory rested on his scientific reputation. This reputation, in turn, rested on JENNER being an F.R.S., and this distinction was due to a paper which JENNER had read before the Royal Society in March, 1788. On the truth or otherwise of the points adduced in this paper the value or worthlessness of vaccination would, according to the author, consequently appear to depend; hence the paper is discussed and largely quoted in detail.

Briefly summarised, JENNER'S paper announced the discovery on his part of the circumstance that after the hatching of the cuckoo's egg in the hedge sparrow's nest, the newly hatched cuckoo proceeds to dislodge from the nest both the young hedge sparrows, as soon as they are hatched, as well as the unhatched hedge sparrow's eggs. The mode of accomplishing this was explained by JENNER to be very curious. The little animal, he says, "with the aid of its rump and wings contrived to get the young bird upon its back," the process being facilitated by the existence of a hollow in the middle of the back; and the bird or egg being thus safely deposited, the cuckoo clambered to the edge of the nest, and by means of a jerk cast its burden overboard. More than a century has elapsed since this more than "Irish landlord power of eviction" was, according to Mr. LEVY, first discovered, and though its truth has been generally accepted, yet Mr. LEVY finds himself able to dispose of it and by implication to dispose therefore at the same time of the theory of vaccination as a protection against small-pox. Other authorities, including DARWIN himself, have quoted or adopted JENNER'S view as to the ejection of the young hedge sparrow, but at last "the scientific pet of a century ..... is gathered to the category of extinct animals," and Dr. CREIGHTON, who has found out JENNER in so many other enormities, has "the chief honour of the execution ..... of cock-robin."

JENNER had declared that his statement was based on actual observation. He had announced that he could "distinctly see" what was going forward in the nest; but Dr. CREIGHTON, who is quoted by the author, is stated to have shown that what JENNER "said he saw" is "incredible"; that, having discovered "the untrustworthiness of JENNER on the vaccination question," he was led, apparently in a similar spirit of inquiry to that displayed in his previous work on JENNER, to examine the credentials of the "cuckoo story," and, according to Mr. LEVY, he found out, as the result, that this story, with its explanation founded on scientific authority for a century, had been based upon the imagination of a boy whom JENNER had employed to see what he had declared that he had seen himself, and that it is, in fact, nothing but "an urchin's hoax and a charlatan's lie." Then follows a triumphal peroration on Dorsetshire milkmaids, superstition, vulgar imposture, absurd credulity, and bias, and vaccination has evidently received the deathblow which everyone had hitherto imagined had been the lot of the unfortunate hedge sparrow in its fall from the nest to the cruel earth below. *Sic transit gloria mundi.*

We had reached this stage in Mr. LEVY'S singularly conclusive pamphlet, when we took up "The Zoologist" of May, 1886, which is edited by Mr. J. E. HARTING, F.L.S., F.Z.S.,[2] and which, oddly enough, contains a paper by Mr. JOHN HANCOCK, entitled "Facts in the Life History of the Cuckoo." Mr. HANCOCK tells in great detail a series of his own observations as to a hedge-accentor's (hedge-sparrow) nest in which he found, besides four eggs of the hedge accentor, one cuckoo's egg, the nest being in a bramble-bush near the bottom of a sloping terrace at Oatlands. These observations were continued from June 17th to July 5th, 1884; they record the hatching of the cuckoo's egg on June 27th, followed next day by the hatching of two young accentors. With a precision, that is somewhat aggravating after reading Mr. LEVY and Dr. CREIGHTON, the author proceeds to explain that at a few minutes after 5 A.M. on June 28th the young cuckoo succeeded in getting one of the accentor's eggs "on its back in the most clumsy manner," and after a series of efforts the egg "was put on the edge of the nest by the young cuckoo in my presence," and ultimately cast out into the bush below. A young hedge sparrow was next tackled, the cuckoo "moving its wings like hands;" and, after several unsuccessful struggles, the young hedge sparrow was "about 11 o'clock ..... put over the edge of the nest" by the young cuckoo. But, unfortunately for the disposal of the vaccination theory, Mr. HANCOCK'S observations were shared by others, for he explains that the second egg was pushed out of the nest by the young cuckoo "at 1 P.M., in the presence of myself, Miss ABBS, and my sister, whom I had specially invited to come and see the proceedings of the young cuckoo." Summarising his account, Mr. HANCOCK explains that the eggs of the cuckoo and the accentor "were found in the nest of the accentor on June 17th. On Friday, June 27th, the cuckoo's egg and two eggs of the accentor were hatched. On Saturday, June 28th, one attempt to put out accentor's egg did not succeed. At 10.30 A.M. first egg was put out of nest. About 11 A.M. the first young accentor was pushed out. At 1 P.M. the second egg was pushed out in the presence of three witnesses. The last of the lot, the second young accentor, was removed between 1 and 3 o'clock P.M., during the time I was away or absent."

We ought, in justice to Mr. LEVY, to say that in issuing his pamphlet he does not profess to be either a student of natural history or of medicine, but introduces himself as a "lecturer on logic."

THROUGH the courtesy of the Agent-General for the Cape of Good Hope we have received a copy of a *Gazette Extraordinary*, dated May 18th, 1892, issued by the Government of that colony. This *Gazette* contains the official promulga-

[2] John Van Voorst, 1, Paternoster row, E.C.

tion of "The Leprosy Repression Act, 1884," and a statement of regulations made under the Act. The object of the Act is thus stated: "To check the spread of the disease known as leprosy." In the first paragraph of the Act there is a very important statement; and its importance is not lessened, but is rather increased, by the fact that it has recently been asserted that leprosy tends to diminish with the spread of civilisation and, consequently, of sanitation in countries prone to this disease. This is the statement: "Whereas the disease of leprosy is prevalent in this colony, and has lately been spreading and continues to spread ....." Here, then, is an official announcement of the fact that leprosy "continues to spread" at the Cape of Good Hope. The Act provides that when it is certified by any "duly qualified medical practitioner" and by a "field cornet," or justice of the peace that any person is a leper, "and that the fact of such person being at large is likely to spread such disease, the Governor (of the colony) may, by warrant under the hand of the Colonial Secretary or Under Colonial Secretary, order that such person shall be removed to such asylum or hospital as he shall appoint, to be there detained during the Governor's pleasure, and kept apart from contact with all other inmates of such asylum or hospital who are not afflicted with the same disease. Provided always that every such person, while so detained, shall have the liberty and privilege of seeing his friends and legal advisers at all reasonable times under such regulations in force for the time being as the Governor may approve in that behalf." The Act also gives power to compel the keeping of male and female lepers in separate asylums; provides for the maintenance out of the colonial revenues of all pauper lepers and the making by the "superintendent or keeper" of the hospital or asylum of a special agreement with any well-to-do leper which would require such a leper to pay his own expenses while he is detained in the asylum; prescribes the payment of fees to medical men employed by the proper authorities under this Act; and the giving to the local authority, or to any resident magistrate, by all district surgeons and medical officers," when they are requested so to do, of "any information which may be required in regard to the disease referred to in this Act. ..... Power is given to the Governor to at any time make, alter, and amend such regulations as he may deem to be advisable for the better and more effectually carrying out the provisions of this Act."

The Governor, with the advice of the Executive Council, has made, within the last five weeks or so, some important "General Regulations" under the provisions of the "Leprosy Repression Act." It now is the duty of "every field cornet and police-constable forthwith to report to the resident magistrate of the district the existence of any case of leprosy which may come to his knowledge." Europeans who are lepers are to be kept in wards into which "native or coloured" lepers are not allowed to go; the sufferers are to be classified "as far as possible" according to their condition of disease; notice of the serious illness or death of a leper is to be at once sent to his nearest relative by the medical officer in charge of the case. Visitors are not to be allowed "to enter any ward set apart for lepers or to visit a leper" without a permit from the medical officer in charge. The only person who has right of private access to a leper is his legal adviser.

To the very stringent legislation here set forth the leper in the colony of the Cape of Good Hope must now submit. As we read the Act, it is still legal in the Cape Colony for a leper to remain in his own home, provided the local authorities do not take action in his case and remove him to an asylum or to a hospital. It seems, however, very unlikely, judging from the tone of the Act, that the local authorities will allow lepers to remain in their own homes unless the authorities are convinced that while in his own home the leper will be carefully isolated and properly attended to in everything necessary to his own well-being and to the protection of his neighbours against the infection of leprosy. Here, we suspect, the authorities at the Cape will find some difficulty in carrying out the Act, both as to its letter and its spirit. But we must not forget that the colony is a community strong in the belief that leprosy, whether aided by insanitary surroundings or not, can only make new victims by virtue of the fact of its own infectiveness. Granted that the people have clearly apprehended the meaning of the inevitable consequences of such a belief as this, and have determined to carry their belief into action, then, in this event, it would be indeed venturesome to attempt to measure the amount of success which may crown their efforts. Much—practically everything—will depend upon how this Act is enforced at the Cape. In the interests of the healthy community, and of the lepers themselves, we hope the Act will be strictly carried out now that the people of the colony have decided to try the effect of compulsory segregation in their heretofore unsuccessful attempt to check the spread of leprosy among themselves.

We do not gather from the wording of the Act that the authorities at the Cape have reserved to themselves under it any power of inflicting definite penalties in the case of persons who break the law which it enacts, or even when its provisions are openly set at defiance. Perhaps the authorities have at command some means, which, however, do not seem to be mentioned in the Act itself, wherewith to enforce obedience to its requirements. Should this prove to be a weak point in the working of the Act, we would recommend the authorities at Cape Town to peruse the Act touching the question of the prevention of leprosy which is now in force in the colony of New South Wales. This Act is given in full in Dr. THIN'S excellent work on "Leprosy." The New South Wales' Act seems admirably suited to the purpose which its authors had in view—namely, to enforce, in the most thorough way, the segregation of lepers, and to punish promptly all persons attempting to evade or to thwart the working of the Act.

In the Cape of Good Hope and in New South Wales we see the principle of the segregation of lepers being rigidly enforced. Among our fellow subjects who follow this line of treatment in dealing with leprosy there is no evidence of any tendency on their part to lose faith in what they are doing in that direction. They believe that leprosy spreads among healthy people because it is an infective disease, and they decline to postpone to an indefinite future the possible eradication of the disease by trusting to obtain this end by gradually improving their personal hygienic surroundings. The inhabitants of the Cape Colony have leprosy at their doors. We are told there are

not wanting there certain sad examples of the truth that no person, in any grade of society, in a country where lepers are free to go about as they please, is safe from attack by this most horrible disease. It is not for us in England to judge harshly of people circumstanced as are the Cape colonists with regard to leprosy or lightly to blame them for enacting severe laws against the leper. Many people are always eager to show with what calm, philosophical resignation they can regard the dangers and sorrows which, leaving them untouched, fall heavily upon their neighbours. Shall we be reproached for such an expression of opinion as this when to-day in British India lepers are allowed to act as salesmen in the bazaars and to move about just as they please in the crowded thoroughfares of Indian cities?

IT is the experience of the Council of the Metropolitan Hospital Sunday Fund that the amounts collected throughout the metropolis at its various places of worship are not all gathered in at the Mansion House for some week or two after the appointed day. Many causes contribute to this delay, among others the desire on the part of some of the authorities to afford an opportunity of contributing to such members of their various congregations as may have been prevented from taking part in the good work at the appointed time. Such delays it is quite impossible to regret, but it is none the less a consequence that not for some considerable time after the taking of the collection—not, indeed, until the public interest has begun somewhat to wane—can the result be ascertained. We are, however, very glad to learn from the Mansion House and from those gentlemen who have kindly furnished us with particulars of their Hospital Sunday collections that so far as it is at present possible to forecast the result which the next few weeks will bring to light it promises to be a favourable one, and it is possible to be sanguine that the collection of the present year, if it does not realise all that has been asked for or even all that has perhaps been hoped for, will compare very favourably with the past. It is, however, a matter worth the consideration of all whom it concerns whether something more cannot be done to bring home the claims of this fund to the minds and consciences of Londoners than is done at the present time. At the meeting which was held at the Mansion House on the Friday in last week great stress was laid—and very properly—upon the responsibilities of the press in regard to this matter. The pulpit has proved itself to be a most efficient organ for the diffusion of information concerning the needs of the metropolitan hospitals and the presentation of their annual appeal to the congregations of the metropolis. But the success of the pulpit cannot absolve the press; on the contrary, it rather tends to show how great is the opportunity which, for the most part, our contemporaries systematically neglect. But though too often overlooked, the opportunity is not wholly neglected, and we have noted with singular pleasure that several of our more influential contemporaries have this year used their influence in the promotion of this most worthy object. This was notably the case with the *Daily News*, which, on the Thursday preceding Hospital Sunday, published a leading article that cannot well have failed to produce an effect upon the Sunday's offertory. We trust that another year may witness a large development in this direction, and that the press of the metropolis will acquit itself of the responsibilities of its position in a way that will leave little, if anything, to be desired. The fact that a matter of so great importance should have awakened only an inadequate amount of public interest is partly, no doubt, to be accounted for by the circumstance that London is so vast as to be hardly conscious of its essential unity, and that, being the metropolis, it is apt to be so much occupied with matters of imperial concern as to relegate its own local matters, even though matters of the greatest importance, to a subordinate position. These causes have conspired to affect—and prejudicially to affect—every department of the municipal life of London, and perhaps no surprise ought to be felt that its hospitals should suffer in common with practically all the institutions in which municipal life finds expression and organisation. But, on the other hand, there has in recent years been a very remarkable growth of the sense of corporate unity throughout the metropolis, and improvements in its municipal government realised and promised bear testimony to the reality and importance of this awakening. It would be a strange and a hard case if the hospitals alone should profit nothing by the higher organisation and better government of London, and we refuse to believe that the quickened sentiment and the awakened interest which have done so much in other directions are not capable of being turned to good account in this direction also. The value and efficiency of forces of this kind when directed to a good end have been demonstrated over and over again, and seldom demonstrated in any more striking way than by the very movement now under discussion. Twenty years ago it was a distinctly unusual thing to have a collection in a place of worship for the benefit of any hospital, and in the metropolis a thing not yet heard of that a collection should be made for the benefit of hospitals in general. To-day such a collection is not only an established institution, but it is one that yields a definite revenue that can be calculated with some nicety and relied upon with ample confidence. This great result has been brought about by organising the clergy for the purpose. More recently THE LANCET has been instrumental in securing for this movement a large measure of interest and support among our professional brethren in the metropolis, and we trust that the effort which it has been both our privilege and our pleasure to put forth on behalf of the movement has assisted in some measure to enlist the sympathy and aid of not a few beyond the circle of our ordinary readers. By means like these a great result has been brought about and one which we can all contemplate with a large measure of satisfaction. It is, however, impossible not to perceive that if the people of London could be really awakened to an adequate sense of what are the needs and what the services of the hospitals established in their midst, we should see a development of the Hospital Sunday movement that would place their work on a new and very different footing from that upon which it is at present carried on. There is one, and only one, voice which can effectively supplement for this purpose the

agencies at present engaged in urging the case for the sick poor and that is the voice of the metropolitan Press. This view is one to which it will be our duty to recur at a future time. We indicate it at the present moment because it may well be supposed that on the morrow of Hospital Sunday everybody—not excluding the journalist—is in the humour to consider, and consider favourably, any suggestion which relates to the success of a movement to which London is so deeply committed, alike by interest and profession, as the adequate maintenance of its hospitals and, as a means thereto, the liberal support of the Mansion House Fund.

Annotations.

"Ne quid nimis."

THE REGISTRATION OF MIDWIVES.

THE following is the report of the Select Committee of the House of Commons appointed to consider the question of the compulsory registration of midwives:—"Your committee have sat six times, and have taken most valuable and important evidence from medical men and practitioners in various spheres of practice both in favour of and opposed to the registration of midwives, and also from trained and experienced midwives. This evidence has shown that there is at present serious and unnecessary loss of life and health and permanent injury to both mother and child in the treatment of childbirth, and that some legislative provision for improvement and regulation is desirable. They have also had evidence showing that there is a wide field for training in midwifery now unused connected with parish infirmaries and home practice in populous places. Their inquiries have been cut short by the approaching early dissolution of Parliament, and they therefore report the evidence and recommend a continuation of the inquiry in the next session of Parliament." In the draft report which was submitted by Mr. Rathbone there was a paragraph to the effect that "the evidence taken so far is strongly in favour of some sort of certificate, register, or licence." The committee, however, decided to strike out this paragraph. We hope to be able shortly to place before our readers an exhaustive analysis of the evidence given before the committee by the various witnesses.

THE ELECTION TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THERE are no less than ten candidates for four seats on the Council of the Royal College of Surgeons. Two—Mr. Thomas Smith and Mr. A. E. Durham—are seeking re-election, and the remaining eight—Mr. George Cowell, Mr. Howard Marsh, Mr. J. McCarthy, Mr. A. O. MacKellar, Mr. Henry Morris, Mr. Warrington Haward, Mr. John Tweedy, and Mr. William Anderson—are contesting the two vacant seats. Both Mr. Thomas Smith and Mr. Durham belong to large hospitals, where they are deservedly popular, and can command a considerable personal following. Mr. Thomas Smith is also well known as a liberal-minded and progressive member of the Council, where he has done good service in counteracting influences which have not tended to unite the constituency of Fellows or to bring them into harmonious relations with the Council of the College. There is, therefore, every prospect that Mr. Thomas Smith will be returned—and deservedly returned—at the head of the poll, and if so perhaps he may be induced to reconsider the decision at which he is known to have arrived not to accept the office of President of the College. Mr. George Cowell's supporters on a previous occasion were not sufficiently numerous to make us sanguine that he will be successful now; but his views are substantially in accordance with those of the more enlightened section of the Fellows, and we should be glad if he secured a seat upon the Council of the College. Mr. MacKellar and Mr. William Anderson seem to be standing rather as champions of the interests of St. Thomas's Hospital than of the Fellows. Mr. Howard Marsh, Mr. Warrington Haward, and Mr. J. McCarthy are to some extent "dark horses," but as two of them are members of the Court of Examiners, which has already six of its members on the Council of the College and the other has been mentioned as the nominee of the conservative element in the Council, we must regard them as sympathising at all events with official views of College politics. The two remaining candidates are Mr. Henry Morris and Mr. John Tweedy. Mr. Henry Morris formerly belonged to the Association of Fellows, and his views are generally in harmony with those advocated by the Association at the present time. The main point of difference concerns the election of the President of the College, which he in common with many others would wish to see retained in the hands of the Council; but the election of the President by the Fellows can scarcely be regarded as within the immediate range of practical politics. The cardinal point of all reform so far as the Fellows are concerned is consultation of the Fellows by the Council on all important matters, and, as Mr. Morris is strongly in favour of this course, he ought to be supported by the members of the Association of Fellows and all who desire to see the Fellows acquire their proper influence in collegiate affairs. Of Mr. John Tweedy it is impossible to speak too highly. No one is better acquainted with the past history of the College and with all the details of its constitution. No one possesses a warmer sympathy with the legitimate aspirations of the Fellows of the College or is more capable of giving expression to his views effectually in the Council. The Fellows are largely indebted to Mr. Tweedy for the advantages which they have recently gained from the Council of the College and it would only be an act of justice and gratitude if the electors returned him to the Council in close proximity to Mr. Thomas Smith. The influences which are at work in a College election are very various and it is impossible to exclude secondary and even tertiary considerations. There is a school vote, a personal vote, a provincial vote, a sentimental vote, a professional vote, a canvassed vote, often promised without due consideration, and a party vote, and of these several take precedence of the vote that is given to a candidate because his views of College politics are in accordance with those of the elector. It is this which renders the result of any election at the College uncertain and which prevents the election from being a real test of the opinions of the electors on the collegiate questions of the hour. It is this which gives an advantage to official candidates, for, generally speaking, they belong to the schools which are numerically the strongest. Nevertheless, we have faith in the ultimate triumph of the principles which we have upheld for so many years and, if the electors at the College desire to see those principles prevail, they will return Mr. Thomas Smith, Mr. John Tweedy, Mr. Henry Morris, and Mr. George Cowell to the Council by very substantial majorities over candidates whose opinions have never been expressed or ascertained.

HOME: RURAL, URBAN, OR SUBURBAN?

A VARIETY of excellent reasons have contributed to the formation of the common opinion that it is good for persons engaged in city business houses during the *day* to spend their hours of rest amid the healthier surroundings of a

rural home. Adults are, in some ways, gainers by the exchange, and, in a much greater degree, so are their children. The smiling cottages and villas which are springing up round every large town possess evident advantages over many older street dwellings. In and around them there is greater cubic air space, they are better lighted and ventilated, even the less pretentious have their baths with an ample water-supply, and domestic sanitary arrangements, if often imperfect, are usually much more in accord with scientific rule. Last, and far from least, in importance are the benefits conferred by freer and purer air and out-door recreation. There is little wonder, then, that children especially thrive among such favourable circumstances. The picture is a bright one but it would not be real without some shadows. These, though fortunately not such as to overcloud the whole, are still not without a decided influence upon its general tone. One in particular cannot fail to attract notice. We might call it an effect of distance. It is, we must admit, largely remediable, and even self-adjusting. It consists in the frequent inconvenience incurred by railway journeys to and from school or business. It is not altogether easy to recognise at first sight the effect of this little cloud upon the landscape. The children of a family which has migrated are not much affected by it, nor are the majority of men and women while still in the vigour of their youth. The case of the parental breadwinner of middle age is different. For him the change implies the addition of various small worries to those which form his daily environment. There is the morning bustle, with its hastily swallowed meal, and its rush to catch an early train; and again the push to finish work in time to begin, perhaps at a late hour, the return journey. These may seem to be mere trifles, as they are if taken severally, but they are such as tell decisively against health and temper during years of repetition. We have often questioned whether the grey hairs thus prematurely added are fully compensated by the freshness of sleep and of Sunday rest in a relatively pure atmosphere, and we would say that the privilege is often too dearly purchased at its cost. Doubtless it is also often preferable, though not in every case, to life on a city flat. Health and comfort in our opinion, however, are more wisely sought by those who follow amiddle course. Life in some suburb near the scene of business activity affords a better solution of the difficulty as to atmosphere and sanitary convenience. Under no ordinary conditions of rural amenity would we exchange for this the rush and rattle of a tedious and often repeated railway journey between town and country.

THE BRITISH MEDICAL ASSOCIATION.

THE sixtieth annual meeting of the British Medical Association will take place at Nottingham from July 26th to 29th. The President-elect is Mr. Joseph White, F.R.C.S. Edin., consulting surgeon to the Nottingham General Hospital. Dr. James Cuming of Belfast will deliver an address in Medicine; Dr. W. H. Hingston of Montreal one on Surgery; and Dr. Sims Woodhead of London one on Bacteriology. In the Section of Medicine (Dr. W. H. Ransom, President) there will be special debates on Peripheral Neuritis, and on the Treatment and Prognosis of Ascites. In the Section of Surgery (Mr. J. Croft, F.R.C.S., President) there will be debates on the Surgery of the Thorax, the Surgery of the Liver and Gall-bladder, and the Treatment of Spinal Abscess. In the Section of Obstetric Medicine (Dr. A. L. Galabin, President) the special subjects for discussion are: (*a*) The Treatment of Uterine Fibroids and (*b*) Post-partum Hæmorrhage. In the Section of Public Medicine (Sir Walter Foster, President) a list of no fewer than seventeen subjects has been put forward as suitable for discussion, including the Legal Restraint upon the Employment of Women in Factories before and after Childbirth, Infantile Insurance, Coroners' Inquests, the Disposal of the Dead, Isolation Hospitals, Measles, Small-pox, Scarlet Fever, Offensive Trades, Tuberculous Meat, Epidemic Influenza, and the Disposal of Town Refuse. Dr. Rentoul has given notice of a resolution to the effect that all stillbirths after the fourth month of intra-uterine life should be registered. In the Psychology Section (Mr. Bevan Lewis, President) the special subjects are Psychoses after Influenza, Insanity as a plea for Divorce, and Neural Action corresponding to the Mental Function of the Brain. In the Ophthalmology Section (Mr. Priestley Smith, President) a discussion on the Diseases of the Lacrymal Apparatus will take place. In the Section of Diseases of Children (Dr. Lewis W. Marshall, President) the Diagnosis and Treatment of Croupous Pneumonia in Children and the Treatment of Severe Club-foot will be discussed. In the Section of Pharmacology and Therapeutics (Dr. J. O. Brookhouse, President) the special subjects are (*a*) Cardiac Tonics and the Indications for their Use, and (*b*) Dyspnœa and its Treatment by Drugs. In the Laryngology Section (Dr. R. A. Hayes, President) the Etiology, Pathology, and Treatment of Nasal Neurosis, Catarrh of the Nose and Throat, and Granular Pharyngitis are the three topics selected for consideration. The social arrangements of the meeting comprise a Conversazione at the Castle, given by the Mayor of Nottingham; one at the University College, given by the President and the Midland Branch; the public dinner of the Association, to be held in the Mechanics' Institute; garden-parties; and a series of attractive excursions to Belvoir Castle, to Sherwood Forest and the Dukeries, to Haddon Hall and Chatsworth, and to Lincoln.

MEDICAL CHARITY IN FLORENCE.

THE Tuscan capital has long signalised itself by the public spirit, professional as well as lay, which it devotes to the rescue or relief of the sick poor. Its organisation of the Misericordia, which so deeply interested Queen Victoria during Her Majesty's sojourn in the city four years ago, includes members of every grade of society, peer and peasant, artist and shopkeeper, scholar and mechanic; and as its detachments thread the streets on their way to or from the houses of the ailing, the dying, or the dead—its members indistinguishable from each other in their black or white stoles, which cover the whole person, all except the eyes—they offer a spectacle unique, it is said, in the civilised world as an embodiment of a philanthropy which ignores all claims but those of afflicted humanity. "Res sacra, miseria"—a sacred thing is suffering. Such is the watchword to which it marches, while the lesson it conveys is fraught with fruit of charity in every sympathetic eye-witness throughout every hour of the passing day. That the spirit which inspires it has lost nothing of its honourable contagion is manifest from the association recently established in Florence under the title of "Guardia Medico-Chirurgica Permanente"—or permanent medico-surgical guard—to the constitution and work of which we have from time to time drawn our readers' attention. The report of the first "quadrimestre" of 1892 is now before us, and its record of illness relieved and recoveries completed attests the skill and assiduity with which the association works. Its *personnel* is composed chiefly of young physicians and surgeons recently graduated or still in the undergraduate stage, and its honorary president is the well-known public-spirited layman, the Commendatore Egisto Fabbri, to whom Florence in general, and her medical men in particular, are under such deep obligations. Its moving agent was primarily a young physician, Dr. Router, and its actual director, ably reinforced by the judgment and, on occasion, by the purse, of the Commendatore Fabbri, is Count Carlo degli

Alessandri. The circumspection with which its operations are planned is only second to the enthusiasm with which they are carried out, as is evident in the increasing confidence they inspire among a poor, uneducated, superstitious, and therefore irrationally jealous proletariat. Of this absolutely penniless *clientèle*, whose wants used to encroach on the valuable time of the working practitioner, 176 urgent cases were relieved in the month of January last, 131 in February, 93 in March, and 102 in April. The consultations in the *locales* of the "Guardia" reached in those four months the high number of 6843. Vaccinations and revaccinations were also vigilantly practised, so that, all told, the work of the "Guardia" for the "quadrimestre" ending April 30th, 1892, may in the language of the report be called not only "importante" but "completo." Already the well-to-do classes have begun to take a warm and effective interest in the Association, and the report dwells with reasonable satisfaction on the support the work now receives in quarters supposed to stand aloof from popular sympathy. From Florence we hope the example will spread to other Italian cities so as not only to bring comfort, relief, and rescue to the suffering poor, but also to set free the hands of large numbers of the profession hitherto prevented by such unremunerative practice from adding to those achievements in pathology and therapeutics in which Italy is beginning to resuscitate her long-past fame.

LARGE "TRANSACTION OF BUSINESS" IN PROVIDENT DISPENSARIES.

THE Leicester Provident Dispensary claims to be the largest in the kingdom. At the Council meeting, presided over by the mayor (Alderman Wright), satisfaction was expressed at the largeness of the membership—36,000. The rush to the dispensary had been increased by the influenza last year. The death of one member of the medical staff, DR. OLIPHANT, was much regretted. The illness of another had compelled his resignation. The work of the medical men and their remuneration are not given in the newspaper report which we have before us. But we can easily imagine what the work must have been. The dispensary is governed by a board of independent gentlemen, from whom the mayor says the doctors always get justice. We are glad to hear it. But in few of these institutions is the reward of the medical man what it should be. The subscription list is about £300 a year. To meet the expenses £500 would be necessary. There is a deficit in last year's account of £150. Too great an air of "business" pervades the reports.

CHOLERA INTELLIGENCE.

IN addition to the stations for observation and detention appointed by the Russian Government in the Caspian Sea, somewhat similar stations have been appointed near the Perso-Russian frontier at Beliasovar, Julfa, and Jebrail, with a view of preventing the extension of cholera into the Russian empire. In the meantime no change is reported as regards the epidemic at Meshed, which place has been abandoned by Europeans, the mortality there from cholera last week having reached 250 a day. Nishapur and Sabzevar have also suffered to some extent. These two towns are both to the westward of Meshed and on the main road to Astrabad. As far as possible the movement of pilgrims has been stopped and a quarantine of six days has been imposed on the Russo-Khorassan frontier. Great alarm is felt at Tashkand at the extension of cholera both in Persia and in Afghanistan. Ten days' quarantine has been imposed in Cyprus on arrivals from Bassorah; but as yet we have no intelligence as to the existence of cholera in Southern Mesopotamia, or indeed in South-western Persia. An alleged occurrence of cholera on board the *Crofton Hall*, which sailed from Calcutta to Hull on June 3rd, probably calls for some different explanation from that assigned to it in the public press. After leaving with all hands well, the vessel returned on the 13th "stricken with cholera," and out of twenty-nine persons on board twenty-four were seized with illness, and six died. The disease is stated to have been associated with the use of pickled beef which was offensive when served out, and those only who ate the beef suffered from illness. So, also, those who ate most heartily suffered most severely and fatally. This, according to Dr. Simpson, was the cause of the disease; if so, it is more likely to have been one of those cases of meat-poisoning such as have been reported in this country during recent years than an outbreak of cholera as that disease is commonly understood.

EYE-STRAIN AS A CAUSE OF NERVOUS DERANGEMENTS.

DR. AMBROSE RANNEY, in the *New York Medical Journal*, draws attention to the view that "eye-strain" may be a frequent and extremely important factor in causing many forms of nervous derangements—even in such as are commonly regarded as organic diseases—as, for example, epilepsy, chorea, and insanity. Among the cases reported by Dr. Ranney which were cured by the use of spherical, cylindrical, and prismatic glasses, combined occasionally by tenotomy of certain of the ocular muscles, may be mentioned the following: Four of epilepsy; several of nervous prostration of so severe a form as to justify the most serious doubts of a perfect recovery being possible; one case of mental collapse to an extent which rendered the patient unable to dress himself until told which article of apparel first to put on; one case of melancholia with morbid impulses, the patient walking about the streets touching every tree and lamp-post he met; one case of epileptic mania in a patient who required a padded room; several in which confirmed inability to sleep, severe neuralgic paroxysms, constant headache, &c., formed an important feature in the clinical histories; one case of very severe neuralgic paroxysms of the face which drugs would not control; and other cases of various conditions that were equally distressing to the patients, and that had withstood all therapeutical measures.

THE TREASURERSHIP OF ST. BARTHOLOMEW'S HOSPITAL.

THE resignation of the treasurership of St. Bartholomew's Hospital by Sir Sydney Waterlow is an event of importance. His administration of the affairs of the hospital has been characterised by great ability and efficiency, with much personal trouble and supervision. One proof of this is that during the eighteen years he has held the office the income of the hospital has increased from £45,551 to £71,833, in spite of a falling-off of nearly 50 per cent. in agricultural rentals. The medical school has been enlarged, and the medical and surgical staff of the hospital has been increased from thirty (with nine residents) in 1874 to fifty-seven (with thirteen residents) in 1891. Special departments for the better teaching of ophthalmic and other groups of disease have been established. Isolation rooms have been provided. The nursing department has been entirely reorganised by the establishment of a training school for nurses. The female nursing staff of the hospital has been increased from 120 in 1874 to 232 in 1891. Hydraulic lifts have been established in each of the four wings of the hospital for the use of patients and of the staff. The entire system of main drainage has been reconstructed and the sanitary arrangements of each ward remodelled at a cost exceeding £25,000. The hospital has secured a convalescent home with seventy beds at Swanley in Kent. No doubt the changes thus epitomised were called for either in the

course of the natural development of the hospital, with its unequalled wealth, or more urgently on sanitary grounds; but it is to the credit of Sir Sydney Waterlow that he perceived the necessity and so husbanded the resources that they could be easily executed. It is gratifying to know that he does not retire on the ground of ill-health, but in deference to the advice of his friends and of his physician who advises him to winter in the Riviera. It is understood that Sir Trevor Lawrence will be asked to accept the honourable post so well held and now vacated by Sir Sydney Waterlow.

THE CASUAL WARDS BILL.

THE Casual Wards Bill for London, which is about to be brought up before the Lords, requires that the Metropolitan Asylums Board shall establish a central system of communication with casual wards in the metropolis, and, when necessary, provide for the conveyance of any person in need of accommodation to the ward where that accommodation can be most conveniently obtained. This no doubt is a step in the right direction, and the disgraceful delays which have so frequently shocked the public conscience in the removal of sick and dying casuals to a place of shelter will, it is to be hoped, cease to occur. At the same time it is a pity that the Bill has, owing to the exigencies of the dissolution, to be hurried through Parliament without more discussion. In fact we should have been better pleased to have seen the whole management of the "casual ward system," not only of the metropolis but of the whole country, transferred from the board of guardians to a central authority. The present Bill we are convinced is only an instalment of that wider measure which will some day regulate our vagrant population, which will afford proper shelter and accommodation for the honest labouring man in search of work and help him on his way, whilst the lazy and habitual tramp should be dealt with more sternly. Above all, special assistance for those taken sick upon the road should be bountifully provided. We have repeatedly pointed out the means by which such measures can be effected, and they are neither cumbersome nor expensive. In the meantime we shall view with pleasure anything that diminishes the power of the boards of guardians over the vagrant poor.

ADVANTAGES OF FOGS.

No less an authority than the president of the Institute of Civil Engineers has declared that the sulphurous vapour produced during the combustion of coal is most beneficial to the health of the inhabitants of London, disagreeable though it undoubtedly is. As many as 350 tons of sulphur are thrown into the air in one winter's day, and the enormous quantity of sulphurous acid generated from it deodorises and disinfects the air, destroying disagreeable smells emanating from refuse heaps and sewers and killing the disease germs which find their way into the atmosphere. There may be a good deal of truth in this view, but there is undoubtedly another side to the question. It is an old comparison that a doctor and his drugs bear a relationship to the patient and the disease like that of a policeman towards a householder attacked by a garotter. The policeman lays about with his truncheon, sometimes he hits the householder, sometimes the garotter, and the good or ill which results from his interference will depend upon which party happens to get the most and the heaviest blows. This simile is admirably suited to sulphurous acid in London fogs, for although it may be beneficial to the London householders by destroying microbes, it certainly frequently does them harm by attacking their lungs and bringing on bronchitis and asthma which sometimes prove rapidly fatal, to say nothing of the minor discomforts of a disagreeable taste, filthy smell, stuffed nose, husky throat, smarting eyes, and headache. We think that, healthy though the London fogs may be, the discomforts they cause are so great that Londoners would be really better without them, and that less disagreeable and equally efficient means might be found to clear the air of microbes, while at the same time these other remedies would be enormously cheaper, for they would not entail the almost complete stoppage of traffic or the enormous expenditure of gas and electric light which a bad fog occasions.

THE SCARLET FEVER CASE AT FULHAM.

THE Fulham case of disputed diagnosis of scarlet fever continues to be the principal topic of interest in the local papers. The Board of Guardians have passed a resolution directing the attention of the Local Government Board to Mr. Cooney holding the two offices of district medical officer and medical officer of health, with an expression of opinion that the two offices should not be held by one person. Another question on which the Local Government Board and the vestry seem to hold opposite opinions is that of the medical officer of health being required to give his whole time to the duties of his office. The Local Government Board think he should be so required. It seems but reasonable that a population of 92,000 should have the entire time of a medical officer. The appeal on the case as decided by the magistrate is to be heard on July 9th. It really bristles with fine questions of duty in magistrates, parents, and medical men. It is well worthy of a very deliberate re-hearing in the most judicial frame of mind that can be commanded.—At a public meeting held at the Walham Green Hall, Effie-road, Walham Green, on Tuesday evening, June 21st, it was moved by Mr. Barry, and seconded by Mr. Spencer Lawrence, "That this meeting of the inhabitants of Fulham beg to tender their sincere gratitude to William Cayley, M.D., and Sidney Phillips, M.D., for their valuable opinion in the correct diagnosis of the illness of Emily Williams, given without fee, and wish to express their unabated confidence in the aforesaid gentlemen and in the management of the Middlesex Hospital, notwithstanding the uncharitable and uncalled-for strictures passed by Mr. Curtis Bennett lately at the West London Police Court." It will be seen from our Parliamentary column that the matter was before the House of Lords on Thursday night. A meeting will be held on the 30th inst. at 8 P.M. in the Fulham Town Hall in connexion with the case.

RIVER TRAFFIC AND ITS REGULATION.

THE sadness of what in itself may seem to be an unqualified evil—such, for example, as preventable death—is often brightened by the reflection of a prospective good which comes of it. Every shipwreck, every railway and roadway disaster, shows this, and teaches us—as if in compensation for the tribute of life which it exacts—a lesson of caution for future guidance. Thus viewing the matter we can even extract some grains of consolation from the history of two fatal and avoidable boat accidents which lately occurred on the river Lea. Both resulted from collisions and in each instance a young man lost his life. At the subsequent inquest it transpired that at present the traffic on this river is subject to no recognised system of regulation, that boat-hirers are equally free from any effective means of control, and that the supervision exercised by the Lea Conservancy officials is of the most imperfect kind. The coroner's jury therefore added to their verdict a rider which it will readily be allowed was entirely consistent with the evidence brought before them This was to the effect that a register should be kept of the names and addresses of persons hiring boats, that the regulation of traffic should be ensured by published

instructions, and that the execution of these provisions should be enforced by the river police. The first suggestion is evidently a useful one. It is true that it would impose a restraint not hitherto considered necessary upon boat-hirers, and that after all its practical efficiency must depend upon the personal honour of the latter. Still we cannot see how a system of mere boat registration could serve the same purpose with an equal prospect of success. The necessity of the two other recommendations above mentioned is too obvious for discussion. We trust that the needful rules of the river will be posted at every boat-house and landing-stage. We would also add a hope that the lessons learnt from these accidents on the Lea will not be allowed to pass unheeded by those who have to do with the management of other equally neglected water-ways.

DEATH CERTIFICATION BY UNQUALIFIED PRACTITIONERS.

AT Liverpool an unqualified assistant has been fined £5 and costs for filling up a medical certificate of the death of a child whom he had attended and signing the name of his principal without the principal's knowledge or consent. The excuse was that he did it out of pity for the parents and to avert an inquest. His principal, Dr. McCormick, spoke apologetically for him on the ground that he had completed his curriculum and was prevented from passing by want of fees rather than want of ability. But the magistrate said truly that this constituted no mitigation of the offence. It is amazing that men are still found to put themselves into this false position in spite of repeated warnings.—Mr. Michael Anthony De Quadros, on the 20th inst., at the Lambeth Court, was fined £5 and £2 2*s.* costs for granting a certificate of death in the case of a child he was alleged to have never seen.

UNITED STATES MARINE HOSPITAL SERVICE.

WE have received a copy of the annual report of the Supervising Surgeon-General of the Marine Hospital Service for the United States for the fiscal year 1891. On account of the number of applications, and because of the necessity of maintaining the professional excellence of the medical corps, it is stated that the standard to be attained on examination for admission into this service has been placed at 80 per cent., while the physical examination is also exacting. The medical corps of the service now consists of the supervising surgeon-general, fifteen surgeons, twenty passed assistant surgeons, eighteen assistant surgeons, and seventy-nine acting assistant surgeons. The force of medical officers in the bureau at Washington as assistants to the Surgeon-General consists of one surgeon in charge of the quarantine division, one in charge of the purveying division, one passed assistant surgeon in charge of the laboratory of the service, and another as bureau executive and acting chief clerk. During the year ending June 30th, 1891, the total number of patients treated by the service was 52,992, of which number 15,349 were treated in the hospitals and 37,643 in the dispensaries connected therewith. There are eighteen United States marines hospitals, not including the quarantine hospitals belonging to the service, and one hospital at the port of New York occupied under lease, the purchase of which by the Government is recommended. The Supervising Surgeon-General's report embraces a good deal of information arranged under the heads of Public Health Division, Purveying Division, and those of Quarantine Service, Inspection Service, Immigration, Laboratories, Sanitary Reports, and Statistics, with a number of special papers, medical and surgical, and reports of fatal cases, with necropsies. Many of the papers are distinctly interesting, such, for example, as "studies in service statistics dealing with diseases of the circulatory system and the frequency of heart clot"; "ten years' personal experience of enteric fever," and "influenza or 'grippe,'" together with other papers and clinical reports of cases too numerous to mention.

"CURES" FOR INEBRIETY.

IT is satisfactory to observe that the words of caution which we published last week have not passed by unheeded, and that in consequence the meeting which was announced to be held on Friday, the 17th inst., under the auspices of the Church of England Temperance Society and the chairmanship of Bishop Barry, has been postponed—we trust *sine die*. We respect and fully sympathise with the laudable and earnest efforts of these gentlemen to further the great cause of temperance, and we are for that very reason well pleased that they have not permitted their zeal to outrun their discretion. The interests of that sad, but alas, numerous class of the community, habitual drunkards, are not likely to be served by a hasty and ill-considered attempt to advertise a method of treatment secret in its nature, commercial apparently in its bearings, and not duly submitted for trial and judgment to members of the medical profession who alone are capable of estimating its value or its worthlessness.

HOSPITAL ABUSE AND ITS CRITICS.

THE *Rock*, disclaiming all sympathy with charity reformers, asks for one very drastic measure—*pace* Sir Andrew Clark—the abolition of the out-patient department and of free dispensaries, and would substitute graded provident dispensaries, so as to meet the requirements of every section of society, from the artisan to the small tradesman: the poor to have free cards given them by the benevolent, who would be required to pay a guinea for four cards. These benevolent persons are to be warned by the medical man in attendance of any imposition or unfitness in the recipient. Such conditions involve a large number of benevolent persons and assign an unpleasant duty to medical men. The *City Press* has some sensible observations on the abuse of hospitals and dispensaries by those who can afford to pay. It thinks that the Council of the Hospital Sunday Fund should mark its sense of this evil by withholding grants from institutions which make no attempt at eliminating unfit persons.

POISONING BY HEMLOCK.

IN the *Newcastle Journal* of June 16th is an account of an inquest held on two children, aged respectively nine and four years, who were believed to have died from the effects of eating hemlock. It appears that the children had been playing in a field where their mother was at work. In the evening they complained of fatigue, but this was attributed to the heat. The younger of the two children died the same night and the elder the following night. We have no account of the symptoms or intimation that a post-mortem examination was made. That the deaths were due to some toxic agent is more than probable, and that this agent was the alkaloid of one of the hemlock family not unlikely. At the same time the evidence before us does not warrant us in accepting the explanation embodied in the finding of the jury—viz., that the children were poisoned by hemlock. Was there vomiting, and if so, was the vomit examined for portions of the plant? Was there muscular paralysis proceeding from the legs upwards? What was the condition of the pupils? In most of the recorded cases death from hemlock poisoning has ensued more quickly than happened in the above instances. A man died in three hours and a quarter after eating hemlock (Conium maculatum) in mistake for parsley. A child died in an hour after drinking a decoction of the same plant.

Water hemlock, or cowbane (Cicuta virosa), has proved fatal. Hemlock water drop wort (Œnanthe crocata) is another deadly poison of the same order. Two men died in an hour and a half after eating the roots. Three boys partook of the roots and stems, and two of them died within a short distance of the place where the hemlock grew. In all cases of suspected poisoning, and especially where the poison is of vegetable origin, it is advisable that every precaution should be adopted to obtain all available information both before and after death.

THE PROGRESS OF SMALL-POX.

THE outbreak of small-pox at Pembroke Dock does not appear to have ceased, and eight fresh cases were announced in the last report of the medical officer of health. Amongst other provincial towns to which the disease still clings are Plymouth, Liverpool, Dewsbury, Heckmondwike, Liversedge, Bradford, Wakefield, North Shields, and Halifax, six fresh cases having been recently reported from the latter place. There are also isolated attacks in other towns, and it is probable that similiar attacks are occurring in districts whence the disease is not reported. In the metropolis small-pox is abating; and, having regard to the season of the year, it may be assumed that the special danger of extension in epidemic form is postponed until next winter and spring.

POLLUTION OF THE RIVER AIRE.

A LIVELY conference of the sanitary authorities of the West Riding was held at Leeds on the 16th inst. to discuss the great evil of the pollution of the river Aire. The Marquis of Ripon presided as chairman of the County Council of the West Riding. It required all the suavity and firmness of the Marquis to preserve the order of the meeting, many speakers being disposed to question the jurisdiction of the County Council in the matter. An amendment favouring the creation of a conservancy board to carry out the objects and to enforce more care against pollution on the part of the various authorities on the river was lost by a large majority. In the end resolutions were passed calling on the authorities to make good any defects of drainage or of sewage purification and to take steps to exclude from the river and streams all domestic sewage and trade effluents till they were sufficiently purified, also to exclude from the streams solid refuse and rubbish.

WOOLWICH COMMON.

A CERTAIN amount of dissatisfaction is felt in Woolwich in consequence of a recent notice by the military authorities that football and cricket would henceforth be restricted to a somewhat rough and at times damp piece of ground at the back of the Royal Military Academy, which it seems cannot very easily be drained. There was no difficulty about games on the common until within the last year or two, during which the popularity of football has very largely increased, and this game has attracted numbers of young men and boys belonging to the artisan and labouring classes during the hours when they were not at work. It is, however, impossible to play football constantly on any piece of grass without entirely spoiling it, and the consequence was that part of the ground which is ordinarily used for military manœuvres was so much damaged that the games of the civilian inhabitants were restricted to a small portion of the common, which is not generally used for military purposes, close to the houses where many of the officers reside. The incessant playing—often from six in the morning till late at night—and the somewhat rough behaviour and language of some of the players, naturally brought a crop of protests from the residents, and the military authorities have felt obliged to issue the order complained of. Letters and deputations have been sent to the commanding officer asking that a better piece of ground might be granted for games, and that an exception to the rule might be made in the case of young boys, but the reply has been a *non possumus*. The only thing that remains, therefore, is for the local authorities to do their best to drain and level the piece of ground which has been granted, otherwise there will be but little football during the coming winter for the thousands of Arsenal and Board School lads in Woolwich.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

OWING to unavoidable delay in issuing the report of the Committee of the Association of Fellows, the annual general meeting and the dinner of the Association have been postponed till Thursday next, the 30th inst. The meeting will be held at 5 P.M. at the rooms of the Zoological Society, and the dinner will take place at the Criterion, Piccadilly-circus, at 7.30 P.M. Mr. George Pollock, the President, will occupy the chair both at the meeting and at the dinner.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC

THE inaugural address on the occasion of the opening of a new clinical theatre at the National Hospital for the Paralysed and Epileptic, Queen's-square, was on Thursday, the 23rd inst., delivered by Sir James Paget, Bart. The chair was occupied by the Right Hon. the Earl of Stratford. Sir James Paget, in the course of his remarks, made allusion to the vast progress made in neurological science during the past twenty or thirty years, when surgeons only undertook operations upon the brain with the greatest trepidation, and when trephining was only performed as a last resort in cases that were likely to die. "The mortality from that procedure," said Sir James Paget, "could not be accurately ascertained, but it must have been enormous." At the present time these operations had, by the coöperation of scientific experiment with scientific observation, so advanced that they were undertaken now with a feeling of security. He referred to the localisation of the faculties of the brain as a direct outcome of researches made in connexion with hospitals of this kind. Sir James Paget said that in the profession there was an understanding, rather erroneous, that the licence or diploma of a medical man was a thing which not only conferred a legal right but a sort of moral right to practise. Sir James Paget maintained that it declared nothing more than that on the day on which it was conferred the person receiving was fit to practise. Whether he would be fit ten years afterwards must depend upon himself entirely. So rapidly did medical knowledge progress that no man was fit to practise twenty years after he had gained his qualification unless he had been constantly a student. The chairman proposed, and Mr. Victor Horsley seconded, a vote of thanks to Sir James Paget, and Dr. Buzzard proposed and the Hon. H. D. Ryder seconded, a vote of thanks to the chairman, both of which were warmly accorded. We propose in our next issue to give a fuller account of Sir James Paget's speech.

FOREIGN UNIVERSITY INTELLIGENCE.

Breslau.—An ear out-patient and in-patient department, erected by means of the legacy of the late Dr. L. Jacoby, has just been opened under the direction of Dr. Oscar Brieger.

Strassburg.—Professor Eduard Schär of Zurich has been offered the chair of Pharmacognosis in succession to Dr. Flückiger.

Vienna.—Dr. Moritz Schustler has been recognised as *privat-docent* in Surgery, and Dr. Foltanek as *privat-docent* in Children's Diseases.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Surgeon-General Roth of Dresden.—Dr. Roussel, Honorary Professor in the Nancy Medical Faculty.—Dr. Rudolf Thiry, *privat-docent* in Ear Diseases in Freiburg.—Dr. Rudolf Demme, Professor of Children's Diseases and Pharmacology in the University of Berne, after a long illness.—Dr. D. P. Skaloznboff, Professor of Nervous Diseases in the University of Kazan.—Dr. Amancio de Andrade, Professor of Medical Botany and Zoology in the Faculty of Medicine, Bahia.

ITALY'S wealth in natural mineral waters is just beginning to be adequately appreciated, even by her own sons. Piedmont especially abounds in these, and on the 16th inst. there was added another to her many "Stabilimenti" for the use of such waters at the Santuario di Mondovì. Dr. Guido Baccelli, who was hindered by professional engagements from presiding at the opening ceremony, telegraphed from Rome his congratulations to the promoters of the "Stabilimento" on their having at last made available for therapeutic purposes a mineral water well-nigh unique for its alterative and depurative properties.

"A FURTHER ACCOUNT of the Proceedings of the Association of Fellows of the Royal College of Surgeons of England from March, 1890, to June, 1892," has just been issued to the members of the Association.

THE annual exhibition of specimens added to the Hunterian Museum of the Royal College of Surgeons of England during the past year will be open for inspection on July 5th, 6th, 7th, and 8th.

THE report of the Committee of the House of Lords on Metropolitan Hospitals is completed, but will not be published for several days.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.—A meeting of the Hammersmith and West Kensington Branch of the above Society was held at Southerton House, Hammersmith, on June 15th, Dr. Alderson in the chair. The meeting was very well attended. The minutes of the last meeting having been read and confirmed, the chairman explained that the objects of the Society were—(1) Medical Protection; (2) A Central Council, permanently situated in London; (3) Establishment of local branches with officers. Dr. Winslow during the discussion remarked on the benefit the Lunacy Amendment Act conferred on medical men. By this clause if it could be shown before a master in chambers that proper precautions had been used by the signer and that he had acted *bonâ-fide*, the action then and there came to an end. He submitted to the meeting that if it could be shown that the medical man had not exercised due precaution and had not acted *bonâ-fide* and that the master declined to annul the action, then the responsibility of the Society should cease and should not be responsible for further legal claims beyond the preliminary hearing. It was resolved that the central committee be asked to confirm the following appointments:—Vice-Presidents: C. B. Keetley, F.R.C.S.; J. Savage, L.R.C.P.; Forbes Winslow, M.B., D.C.L.; F. C. Dodsworth, L.R.C.P.; F. Lawrence, M.R.C.S., and E. O. Fountain, M.D., B.A. Council: Chas. Andrews, M.R.C.S.; A. H. Clemow, M.D., and S. D. Clippingdale, M.D., F.R.C.S. Hon. Sec.: Herbert Alderson, M.B.

METROPOLITAN HOSPITAL SUNDAY FUND.

APPEALS MADE ON BEHALF OF THE FUND.

IN accordance with custom, we give below some reports of appeals which have been made in support of the Hospital Sunday Collection. The Mansion House meeting was reported in a second edition of THE LANCET, which was published on Saturday last; but as this edition would not reach the hands of many of our readers, we reprint the report to-day. For the reports of sermons we are indebted to many correspondents, to whom we offer our best thanks for the assistance which has enabled us to place their pulpit appeals on record.

MEETING AT THE MANSION HOUSE.

(The following report appeared in our Second Edition last week.)

THE usual public meeting in connexion with the Hospital Sunday Fund was held to-day (Friday afternoon) at the Mansion House. There was a very large gathering of ladies and gentlemen. The Lord Mayor presided, and among those present were—Sir Sydney H. Waterlow, Bart., Vice-President; Sir Andrew Clark, Bart., M.D.; The Rev. Prebendary E. A. Eardley-Wilmot, Rev. Canon Ingram, Mr. A. Egmont Hake, Rev. T. G. Garten, Rev. John Kennedy, D.D.; Rev. Dr. Marks; Rev. Wm. Hunt, M.A.; Rev. Prebendary Whittington, Lieut.-Col. Nevill, Rev. J. H. Wilson, D.D.; Rev. J. D. Wyatt, Rev. Dr. Löwy, Rev. The Hon. Canon Leigh, Rev. Canon Nisbet, Admiral Trollope, Rev. E. J. Beck, Rev. H. Curtis, Mr. Wakley, Rev. S. A. Barnett, Rev. G. A. Ormsby, Dr. J. G. Glover, Rev. W. T. Du Boulay, and Rev. W. P. Barlow.

The LORD MAYOR, who was received with applause, said: Ladies and Gentlemen,—It is by no means unusual for the Lord Mayor to be addressing a gathering such as I see before me for the special object of aiding the Hospital Sunday Fund; for I may remind you that ever since the foundation of the Fund the Lord Mayor for the time being has always taken the chair, and endeavoured to his utmost to further so good and excellent a movement. Well, now, we are on the eve of Hospital Sunday, and of course our object is to make that day of collection a very substantial and great success. Last year, I believe, there was collected the sum of £45,000. That may strike you as being a substantial amount; but, substantial as it may be, it falls short of the actual requirements of this great movement of ours. Naturally, £45,000 suggests at once that this year, at all events, the sum should be made up to round figures. It was so near £50,000 that naturally we look this time to secure at least that amount. But assuming that we do, we are still very far short of the actual requirements. We want £100,000, and we hope to get it in time. We are all agreed of course that the hospitals, both within the metropolis and without it, are necessary to poor suffering humanity. If we actually endeavour to gauge what the total cost is each year in keeping our hospitals going, we shall find the sum required reaches the enormous amount of at least £800,000. So that what we desire to do by this movement is to contribute towards that amount one-eighth—namely, £100,000. Well, I hope we may succeed in getting it. Let us try. The object is a good one; and I am sure that there are many present to-day who in the past have done a great deal to further and aid this movement. I am sure the inclination to help is strong. Let us see, one and all, whether we cannot add to the amount we have hitherto contributed. Those who have in the past given £10 may possibly see their way now to add £5, or perhaps even to double their subscription. If we can reasonably afford to do so, pray let us do it. Let us not, in appealing to others, forget our own contribution. I am not one to advocate that any individual should address another by way of appeal unless he has set the example. Let us, in the first place, set the example, so that we may appeal to our friends, and be able to say: "Can you subscribe to this

movement? According to my best power, and my means, I myself have subscribed." You will have learned from the notice convening the meeting that we are to be favoured with an address from Mr. A. Egmont Hake, and I am sure we shall all have much pleasure in listening to it.

Mr. A. EGMONT HAKE then addressed the meeting. He said—

My Lord Mayor, my Lords, Ladies, and Gentlemen,—My purpose in coming before you to-day is threefold: first, to remind you of the sufferings of our fellow-citizens; secondly, to clear away certain misconceptions which have arisen concerning those institutions whose mission it is to succour the suffering poor; and, thirdly, to consider how we may best join hands in support of our hospitals in their courageous battle with disease. The universal interest which is now manifested throughout this great city in the general condition, the fierce struggle, the poignant sufferings of the destitute bears witness to a mighty awakening, to a free and frank recognition of the claims which the unfortunate many must ever have upon the fortunate few. For I think we must all agree that the privations of the people have for some time been a subject of genuine and widespread lamentation. The presence of fabulous wealth side by side with ghastliest poverty; the long-continued depression in industry and trade; the bitter complaints against the severity of competition; the constant recurrence of strikes; the exposure of that vile and disgraceful form of slavery, the Sweating System; the constant and contradictory cry of over-population and over-production; the devices for depriving this country of its best blood by the agency of emigration; the anxiety to banish the destitute foreigner from our shores,—all these circumstances serve to show that the condition of the poorer classes is the foremost question of the day.

The sufferings of the poor are great and bitter, and the outlook is dark enough to call for large-minded patriotism and wise philanthropy. But, amid the comedy and tragedy of our own lives, amid the ponderous erudition of the controversialists, amid the passionate ardour of the politicians, amid the aggressive clamour of the agitators, one of the greatest and most immediate causes of social misery is in danger of being clouded, lost, or forgotten. Still, in the confusion of tongues, in the war of the remedies, in the conflict of clashing opinions, let us remember that if we cannot forthwith bring about the amelioration of the people's condition, we can and must strive to lessen those sufferings which arise from bodily ailments, and which are made doubly poignant by the presence of poverty and privation. Besides the responsibility which rests with the leading classes, with what may be called the flower of the nation, there is another motive which should induce the wealthy to maintain our voluntary hospitals in a state of prosperity—namely, the motive of self-interest. For the advance of medical science, the thorough practice of surgery, the training of nurses, the arrest of epidemics, the development of hygiene — all these advantages, conferred by well-managed hospitals on society, are of as vital importance to the rich as to the poor. And all of us here present, save those who may be suddenly stricken down, must by personal experience one day come to realise these facts.

But, my lord, it is my conviction that there is no need to appeal to the self-interest of those who are in the happy position of being able to come to the rescue of our hospitals. The magnificent charity of wealthy London is universally recognised, for during recent generations it has compassed the world. And if charity with us Londoners does not always begin at home; if the rich are apt to lavish their bounty upon alien races and in foreign climes; if, in the meantime, deserving Englishmen, struggling Englishwomen, and hosts of tiny children representing England's future, are left untended and alone, it is because to many of us squalor and indigence are unfamiliar sights, because suffering is courageously endured and often hidden in the homes, and because the sore needs of the sufferers in this city are seldom so vividly flashed before our eyes as are the appalling needs of the victims of devastating catastrophes abroad. Nothing, however, is further from my intention than to deprecate by a single word that grand and truly Christian charity towards sufferers in distant lands which places our nationality so high in the estimation of the world, and which is such a fit appendage to England's power.

That this vast city is opulent enough to adequately support its voluntary hospitals without interruption to its international charity is a fact of which you, my lord, are well aware; for not long ago you gracefully presided over a meeting convened to assist the victims of the hurricane at Mauritius, and leading Londoners will, I am confident, justify the high opinion of their generosity which you now evince by presiding over us to-day. And never was there a movement that called for deeper sympathy than the hospital movement, for the hospitals combat one of the most potent causes of poverty and misery—namely, sickness. We are disposed to judge calamities by their effect upon ourselves and upon our particular circle. But let us not forget that circumstances may enormously augment the poignancy of misfortune. For example, the loss of sight or hearing is a sore affliction to anyone; but when the light fails the far-famed artist his loss seems unfathomable, and a Beethoven stricken with deafness is a tragedy that must for all time move the world. To us all sickness and disease are terrible enough, but when they fall upon the struggling poor they should evoke the sympathies of every human heart. For what are the London poor? A huge population of workers fighting bravely, but often vainly, for their lives; shelter or no shelter, a mere lottery; their worldly goods week by week in pawn, and, in their struggle to beat back the demons of penury and starvation, risking existence to win a day. And when sickness comes, and lack of charity has shut the hospital door, a new terror has crept into their lives. And the families that can trace their ruin to a case of illness may be counted by the thousand. For how is it possible for the poor to tend their sick when one-third of the population of this city have barely a pound a week with which to support a whole family. Who, then, among us dare say that the suffering poor have not a powerful claim upon the charity dispensed by the voluntary hospitals?

Now I hold that our voluntary hospitals would be in a more flourishing condition were it not for certain misconceptions concerning them. For there are certain people who suppose that the hospitals are Government institutions upon which an unlimited demand may be made, and not voluntary institutions supported by charity; there are certain people who forget that hospital management should not be criticised without technical knowledge, and who seem unaware that rash and irresponsible criticism of them hampers those citizens who bear the burden of their administration; there are certain people under the impression that the hospitals have a sufficient number of hands, while the fact is that personal services are almost as sorely needed as funds; and there are certain people who make no distinction between voluntary hospitals and rate-supported hospitals, and are apt to condemn the former for the shortcomings of the latter. But, in addition to all this, there is a prevailing prejudice which most seriously militates against contributions to the voluntary hospitals. I mean the prejudice in favour of their socialisation. That our hospitals should be taken over by the Government or the municipality and be supported by the rates is an oft-repeated parrot-cry, the full meaning of which is seldom understood.

We all know how such cries become popular. And who are the people who boldly recommend socialisation, and would fain convey the impression that they have mastered the question and have found the solution? I am afraid a large number take up the cry simply from a fear that they may be suspected of want of apprehension. It is Hans Andersen's story of the king's clothes over again. You may remember that only the clever ones were supposed to see the king's clothes, and so everybody pretended to see them, and lavished their praises upon them, save and except one crazy man, who had no hesitation in shouting out in the market-place that the king was—well, what shall I say?—bare-footed up to the neck! For my part, I have no hesitation in following the example of that crazy man, and I declare that there is not a single argument in favour of the socialisation of our hospitals. But of objections to their socialisation there is a formidable array, of which I will mention a few. To place the hospitals upon the rates would be to subject them to bureaucratic management, would be to drag them down to the low level of State hospitals abroad, would result in a better accommodation for the rich than for the poor, would raise up prejudices against hospital treatment, would degrade hospital patients as

the workhouse degrades its inmates now, would bring extra taxation upon employers of labour, and thus increase the number of the unemployed and reduce wages, would deprive the wealthy classes of the high privilege and opportunity of exercising brotherly charity towards their fellow men, would widen the gulf between the classes, and would pave the way for complete State tyranny.

And so, there is only one way of remedying the present state of things. And what is that? Charity—liberal, brotherly, open-handed charity. All that is needed is to remember, and to make our friends remember, that there is this great national humanitarian work waiting for us. No matter to what class we may belong, no matter what our means, no matter what our age, we can all easily find a way of taking a part in this glorious work, and of thus enriching our lives.

Sir ANDREW CLARK proposed the first resolution, thanking Mr. Hake for his address, and pledging the meeting to use every endeavour to arouse the inhabitants of London to the importance of maintaining the hospitals and medical charities in complete efficiency, and calling upon the editors of the daily press and upon the clergy to make an earnest appeal to the people to increase their contributions in order to secure not less than the sum of £100,000. He said:—

My Lord Mayor, Ladies, and Gentlemen,—But a few days ago a very sad accident happened at Bishopsgate station. A few of the passengers were killed, some have been crippled for life, many have been injured, and more than fifty households have been invaded with anxiety, with alarm, or with sorrow. Now, ask yourselves for a moment what would have happened if there had been no general hospitals. Suppose these fifty injured sufferers had been taken each to his own home, and suppose—it is no great demand upon your faith—that each of these homes had the common characteristics of the poorest of dwelling-places. Fancy one of these sufferers with what is called a "compound fracture of the leg" taken to his own room, ill lit, badly ventilated, with noisy but affectionate children, a care-stricken wife, bad food, and only occasionally visited by the local doctor. Imagine what the probable course of that man's sufferings would be! The probable issue would be death. If you will cast your eyes for a moment beyond the sufferer himself, and ask what would be the probable future of his family—— Ah! if I were to forecast that future from the facts with which I am familiar from a knowledge of the sick poor, it would be so terrible a one, that I dare not present it before such an audience as this. What did happen to these sufferers? The general hospitals were there; their doors were opened; no delays were interposed. The sufferers were taken at once into bright, airy, comfortable wards; they were put into easy beds; the highest surgical skill was immediately put at their service; trained nurses carried out the doctors' instructions, and everything was done that could be done for a sick man if he were the greatest in all the land. But there is more to be told about our hospitals. What would London be if there were not hospitals for infectious diseases? Imagine what a pest-house of disease it would become. But, furthermore, imagine that there were no general hospitals. Well, London is one of the greatest, if not the greatest industrial centre in the world; and London—with its docks and its shipping, its railways and their stations; its level crossings and its unparalleled traffic—is continually exposing the dwellers therein to accidents which are at once very numerous and quite inevitable. Imagine if, with the many accidents which happen daily in this great city, there were no general hospitals to which to take the sufferers. I need not tell you—you know as well as I can tell you—that innumerable lives would be lost which might be saved; and that the State and the family would be burdened with burdens almost unbearable, and that life itself in a great city like this might at last become impossible. Such would be our fate in all probability if there were no general hospitals. Now I have said a word in praise of the character of the work done in the hospitals of London. Let us advert for a moment to the amount of the work, and for these details, and for many of the admirable details which my memory will not enable me to give, I refer you to THE LANCET of June 18th, and therein in the Supplement to the ordinary number of THE LANCET you will find particulars concerning this great work which will carry more strongly home to your heads as well as your hearts the importance of this work than anything that I can say. I cannot mention THE LANCET without casting my thoughts back for a moment to 1869, when—I will not say solely, because I am not sure—when, mainly in consequence of the earnest advocacy of that good man, Dr. James Wakley—in consequence of his untiring advocacy, of his unfailing enthusiasm, and of his munificent benefactions—he, assisted by Sir Sydney Waterlow, by Canon Miller, by Sir Edmund Hay Currie, and by Mr. Martin, set upon sure foundations that Hospital Sunday Fund which we are present to-day to advocate. I feel, and I do not think I am boasting, when I say that but for these men whom I have named, it is infinitely probable that this great work would have broken down with its own weight. Last year there were 99,000 in-patients, and of these there were cured 44,000, and relieved 39,000, and 7000 remained in the hospital at the close of the year. Furthermore, there were visits of over 2,000,000 of out-patients. I must pause for a moment in alluding to out-patients. There is a very strong and I think a very mistaken desire to shut up the out-patient departments of the hospitals. I hope it will have some influence with others who have influence in this room, when I say that but for the out-patient department I do not know how any doctor would ever come to acquire a full knowledge of the early aspects of disease. What does that mean? It means everything that is highest in the doctor's work, for if he is thoroughly acquainted with the early aspects of disease and knows its approach, he is ready to grapple with it; and it is then, and then only, that he is sure of having the victory over it. Pray do not sacrifice your out-patient work, for it is the mainspring of all the work that takes place in the hospital. Now, the cost of this work—I think the Lord Mayor did allude to that, I am not sure if it made that impression upon those assembled that it ought to have done. The cost of that work is nearer £900,000 than the £800,000 which my Lord Mayor gave to it. Now, there are three methods in which we strive to collect this. One is by the voluntary contributions of benevolent people. The second method is by receiving sums of money which from time to time have been left for the hospitals by right-minded people. Lastly, by means of the Hospital Sunday Fund. Now, I will say about this Fund that it has not, so far as we can ascertain from returns, injured the amount received from the voluntary contributions of benevolent people by the hospitals, and that is a good thing to be able to say. I will say also that it places upon us to-day a sort of responsibility for raising the sum of £100,000. These hospitals and dispensaries are under responsibilities in carrying on their work to the extent of £100,000. Well, I will not detain you longer, having to move the first resolution. I earnestly request that you will yourselves give, and use all the influence you possess to make others give also. There are many reasons for giving to this Fund and, what is of more importance, I regard the reasons as unanswerable. First, this Fund offers an opportunity of collecting in the cheapest way small sums of money that probably would never reach the hospitals at all. Then it gives—not a light thing—a personal interest to all those who contribute on the Sunday to this great work, and it establishes a feeling which I hope will be a growing feeling, a sort of brotherhood in charity in the sustentation of these hospitals. There is another reason for making small contributions express large sympathies. The small contribution that the widow may give on Sunday enables her to open her heart to those charities for which she feels without the humiliation of giving a penny here and a halfpenny there. Then there are two other big reasons indeed, and I am afraid some of my hearers will not like to hear them. The first of these greater reasons is that the Council is keeping a vigilant eye upon the working and the spending of all the hospitals, for it controls its disbursements, and this accordingly enables it to exercise not only a salutary but a very powerful influence on the management of these hospitals. Surely, in supporting this you are supporting all that is best, and enabling the highest work to be done in the most economical manner. Now I am aware of the objections with which the appeal will be met with. "Times are hard, business is bad, claims are multiplying, expenses are increasing, and I do not see how I am to give more than I am giving." That is the position of the Lord Mayor. He said most considerately and much more charitably than I would: "We are to give if we are able, we are to give reasonably." Now I

venture to say, admitting all this is true—and I am afraid it is too true; business is bad, claims are increasing—I venture to say these are just the very circumstances in which you ought to exercise your charity, just the circumstance which teaches charity—that fire from heaven; it is just the very circumstance which, transfiguring the sacrifice, makes it divine.

The Rev. Prebendary EARDLEY-WILMOT seconded the motion. He said he no doubt owed the honour and privilege of this position to the position which his congregation had maintained with regard to Hospital Sunday collections through the energy and devotion of his predecessor, now the Dean of Worcester. Last year the collection reached upwards of £45,000, and, taking an average of the last nineteen years, the sum would amount to £32,000 per annum, which had been administered at a rate not exceeding 3½ per cent. of the amount collected annually, thereby affording the cheapest method of obtaining large gifts, and also of collecting a vast number of small sums which otherwise would not come to the hospitals at all. It appealed secondly to them as philanthropists. Philanthropists would, he thought, acknowledge the benefit of the system of distribution of funds which secured that the distribution should be carried out in the most complete and careful way, and which, at the same time, allowed a vigilant eye to be kept on the expenditure and work of the various institutions, and introduced a salutary influence on the administration of their funds. Lastly, it appealed to them as Christians. In these ways the Hospital Sunday Fund was one which demanded their most urgent support, and he trusted the appeals made to the public of London from that platform and elsewhere would result in a most substantial and munificent contribution to the Fund.

Mr. H. C. BURDETT, in supporting the resolution, made special reference to that part of it which dealt with the appeal to the metropolitan press. No one, he said, was more grateful than himself for the great services which had been rendered to the Hospital Sunday Fund by the metropolitan press. He could not fail to remember that when the Fund fell off very considerably some ten years ago, and they made an appeal to the editors, these latter responded by giving great space in their columns on each of the six days preceding Hospital Sunday. The hospitals used the advertising columns of the press; and he would like to ask the editors to see whether they could not give a special column or half column for each of the days of the week preceding Hospital Sunday to the subject. If they did, he believed it would result in a contribution of something like £25,000.

The resolution was carried unanimously.

Sir SYDNEY WATERLOW, in proposing a vote of thanks to the Lord Mayor as President, said he felt it to be a great privilege for the twentieth time to stand upon that platform to say a few words in support of a movement with which he had been closely connected ever since it was begun. From that beginning to the present time, with one or two exceptions, the collections for this Fund had been yearly increased, and he hoped and believed that the collection to be made this year would, in spite of many difficulties, exceed that which had been made in previous years. When they began in 1872 there were just about 100 institutions applying for help, and this year there were over 150, and many of the old institutions had larger demands and claims upon their funds because they were doing a much larger portion of this absolutely necessary work. There were over 2000 beds which could not be occupied because the hospital authorities had not the assistance they required. He moved the resolution entrusted to him with the greatest pleasure.

The Rev. Dr. KENNEDY said he had the greatest possible pleasure in seconding the motion.

The resolution, which was put by Dr. Kennedy, was carried with acclamation.

The LORD MAYOR, in response, said:—I thank you, Sir Sydney Waterlow, for the very kind manner in which you have submitted my name, and this company for the cordial and warm manner in which they have received it. It is needless to say that it affords me the very greatest possible pleasure to preside over this numerous gathering. We have had a very great treat this afternoon in listening to so many very able speakers. This is not a new movement. It is an old one, and has been nearly, if not quite, twenty years in existence. Sir Sydney Waterlow originated it during his mayoralty, in the year 1872, and from that time down to the present it has gradually, but nevertheless substantially, grown to the position which it occupies to-day. We do not wish to under-estimate the charity and good support of our friends, but nevertheless the institution is capable of greater support, and we do one and all of us desire to see that the contributions shall reach the amount really required—namely, £100,000. At the risk of repetition, I say that the only practical method in which this can be done is not only by giving what we feel we are ourselves able to give, but by interesting others in the movement. We have not done with our obligations, when we have put our hand in our pocket and taken out a sovereign, or when we have written out a cheque for £5, £10, or £20. It is very easy to write out a cheque, especially if you are so disposed and have a balance at the bank. But there is something more required of a man than that. I know the position very well, and shall I give it to you by way of illustration, for I am a culprit myself? If you wish to bestow something suitable on your friends who are to be married, you go out of your way at some self-sacrifice and some loss of time, to choose something which will be suitable and agreeable to them. So it should be in the way of charity, that when you have written out your cheque of £5 or £10 or £20 you should not think that is enough, though it may be generous, but in addition to that you should also take a more active personal interest in the charity to which that cheque is going, and also get your friends to take an equal interest in it. You would be doing double service and an increased amount of good. Here at this meeting we have the presence of many. I take it you are not here from mere curiosity or without anything better to do. You are here with a desire to further this movement. We are grateful for your presence, but all we desire from this platform, and I from the chair, is to tell you that merely coming here and contributing is not sufficient. We expect more at your hands. With the knowledge here imparted to you, and by the smallest exertion on your part, you will be able to interest some other persons to share your sympathies, and to accord their services to this grand movement. Then the object will be attained, the future of the Metropolitan Hospital Sunday Fund will be assured, and even the amount we look for—namely, £100,000—will be secured.

SERMONS PREACHED IN LONDON IN AID OF THE HOSPITAL SUNDAY FUND.

ST. PAUL'S CATHEDRAL.

THE Rev. Dr. Baker, Head Master of the Merchant Taylors' School, preaching at St. Paul's Cathedral upon "The Law of Love," took for his text 1 St. John iv., 10, 11: "Herein is love," &c. Arguing that Christianity based morality upon religion, the preacher showed how St. John summed up the whole of Christian faith and Christian practice in the one word—love. The revelation of God's love for sinful man in the person of Jesus Christ introduced into the world an entirely new principle and ideal of morality. The ruling idea of the ancient world was selfishness. Christianity first destroyed this ideal, and made brotherly love the law of Christian life. This law is not only constantly insisted on in the New Testament, but has been strikingly illustrated in the history of the Christian Church, which is the history of philanthropic institutions. In the middle ages each priory and monastery had its hospital and dispensary. St. Bartholomew's Hospital, originally founded by Rahere in the earlier part of the twelfth century, was a famous illustration, comprising an infirmary for the sick and aged poor, with a lying-in hospital for women and staff of sisters, under the rule of a prior and canons of the Augustinian Order. The beautiful old Norman church of the priory, now known as St. Bartholomew-the-Great, and in process of restoration just opposite St. Bartholomew's Hospital, was an interesting witness to the historical connexion of the church with works of philanthropy and mercy. The many philanthropic institutions of the present day—hospitals, orphanages, refuges, homes, asylums—were all due to that spirit of brotherly love which Christianity was the first to inculcate. By showing this love to our fellow men we might test, as with a thermometer, of the warmth of the love of God.

The Hospital Sunday appeal was probably one that needed fewer words to commend it than any other that could be made. If it had been generously responded to in former years, still how little had been done in comparison with the need and in comparison with the ability to help. This year the need was exceptional, and the appeal also came home with exceptional force after a prolonged winter, in which sickness and suffering had visited nearly every family in the land, and sorrow, national and private, and loss of friends had been only too familiar to all. The exercise of Christian charity was the best and surest way of bridging over the gulf that separated class from class and creed from creed. To-day all joined in professing a common creed, "God is love." By self-sacrifice and unfeigned love of the brethren our hearts would be most surely kept in the knowledge and love of God and of His Son Jesus Christ.

ST. JUDE'S, SOUTH KENSINGTON.

At St. Jude's, South Kensington, the sermon at the morning service was preached by the Vicar (the Rev. Prebendary Eardley-Wilmot), who took for his text 2 Cor. v., 14, 15. The first part of the sermon was a vindication of Christianity from the charge of selfishness and individualism, and an assertion of a claim for the Gospel of Jesus Christ of a distinct superiority over the ethical systems of the day as yielding the highest possible motives for conquering human selfishness and relieving human wretchedness. Coming to the special and practical application of the subject he said: "You are asked to-day, brethren, in common with your fellow Christians throughout the metropolis, to make a very special effort of liberality on behalf of the hospitals, infirmaries, and dispensaries which exist for the relief of the sick and suffering poor—a noble cause, a sacred cause, a cause in which the very tinge of sadness that runs through it makes the more powerful its appeal to the Christian heart. There is no need to enlarge upon the necessity for hospitals or dilate upon the sufferings and dangers they are intended to relieve. Sickness and sin, irreparable consequences of our fall from God, still exist in the world, still are found amongst us, the fruitful sources of the misery and suffering we see around us. The love of God, manifested through the love of Christ, has been exercised to remove the one. He calls upon us by the constraining influence of that love to do our utmost to lessen the other. ..... There is not anything, I will venture to say, for which we should be more thankful in this Christian land than for the many hospitals and dispensaries which Christian charity is sustaining for our sick and suffering poor. Speaking as one who knows something of what work among the poor is, I will even add more. I say that, brought into contact as we clergy are with the sufferings and privations of the poor, our position would oftentimes be intolerable and our duties depressing beyond expression if such blessed institutions as these did not exist. They are, as you know, scattered broadcast over our land and everywhere their usefulness is only equalled by the occasions of usefulness that arise. Eighty-eight hospitals, twenty-one convalescent hospitals, fourteen cottage hospitals, and fifty-six dispensaries are asking the Fund for which we appeal to-day to relieve their pecuniary wants—wants which exceed £100,000. It is perfectly clear, therefore, that the Hospital Sunday Fund, large though it is, magnificent as it is, already must be considerably increased if these hospitals and medical charities are to be maintained in complete efficiency and do to the full their beneficent work among the suffering and the needy. It is a sad and humiliating fact that though the population of London, one of the largest manufacturing and industrial centres in the world, is increasing at the rate of 40,000 per annum, and though the work of our hospitals in relieving this great industrial community is proportionately severe, yet in most of our leading London hospitals beds have been closed for want of funds to maintain them. It would be possible, of course, to meet the necessities of the case by compulsory legislation and to make, as in other countries, our hospitals dependent upon the rates. This would be possible. But how far more noble, far more Christlike, is the system which makes their support come mainly from the freewill offerings of the people. How many an opportunity for a thank-offering for personal blessing in sickness is thus afforded. How grand the privilege of bearing in a very special manner one another's burdens and so fulfilling the law of Christ. Never may the people of England be found wanting in the fulfilment of this most sacred duty. 'There is nothing,' said the late Sir Morell Mackenzie, 'in our social organisation on which we may more legitimately pride ourselves than on the number and magnificence of our hospitals, which all owe their existence to private charity, or, it may be, enterprize, and fulfil their mission of healing and relieving human suffering without assistance from the State ..... There are few human institutions,' he said again, 'which do more real tangible good than hospitals; they take no account of creed or country or personal worth, but, like heaven, send the rain of their beneficence on the just and the unjust without distinction.' It is the cause of these institutions, the voluntary hospitals, general and special, I am pleading with you to-day, as it has often been pleaded from this pulpit before and not in vain! Nor, I am confident, will it be in vain to-day. I need not say much to commend the Hospital Sunday Fund, which to-day makes its twentieth appeal, as a most valuable and efficient channel through which your liberality may flow. Men of business will recognise the value of a method of collection which, though it amounts now to upwards of £45,000 per annum, has yet been administered at a rate not exceeding 3½ per cent. of the sums collected annually during the past nineteen years, and which thus affords the cheapest possible method of obtaining contributions, not only in large sums, such as some of you will give presently, but also in a vast number of small sums, which would not otherwise find their way to our hospitals at all. Philanthropists will acknowledge the benefit of a distribution of funds by an experienced and diligent council—a means by which not only is the best possible distribution secured, but by which also a vigilant eye is kept on the expenditure and work of the various hospitals, and so a most salutary influence is exercised on their administration. And every Christian will welcome an opportunity of doing valuable work most effectively, and at the same time in that quiet, unostentatious, anonymous way which sinks self for Christ's sake and makes an offering of love for the cause of the Master and of the suffering ones He came to relieve." The sermon closed with an earnest personal appeal.

UNION CHAPEL, ISLINGTON.

The Rev. W. H. Harwood preached from the text, "I was sick, and ye visited me" (Matt. xxv., 36). He said: "The text is suggestive of an even larger subject than its own immediate appeal—the relationship of our religious faith to questions of physical health and physical disease. The purpose of the sermon is to emphasise the fact that within the sphere of that relationship lie some of the first and highest duties of the Christian life. These duties come to us as inheritance from the past. As a matter of history hospitals and kindred movements are largely associated with religious inspirations. Without entering into any discussion of the somewhat superfluous question of the direct causes of movements intended for the relief of the sick, it is undeniable that when Christianity exalted such relief into a duty urgent upon all its disciples it gave to the most humane tendencies a great inspiration and impetus, and anticipated many generations beforehand, the best results of human progress. That the Christian Church has sometimes forgotten this duty has accounted for the supposed opposition which has unhappily grown up between ministries to the spiritual aid, to the physical nature of man. Where all the emphasis has been laid upon the spiritual nature it has sometimes gone so far that neglect of the body has been taken as a sign of greater spiritual intensity. But in the healthier ages of the Church there has been no such separation; men have felt that the two parts of the life are interdependent, and that they have not yet learned in which to look for the causes of many actions. The opposite tendency to exalt ministries to the sick at the expense of movements for man's spiritual advance is largely due to the fact that the results of the former are so much more speedy and palpable. The joy of conquering disease must appeal to every man with a human heart, but to the religious man it is simply one part of a general gospel of health. For these duties are not only an inheritance, they are closely associated with the Christian faith. The Christian principles of obedience to God and love to God and man are the parents of all kinds of health. The Christian man is bound to serve, as he has opportunity, all movements which lead to health. Such matters as the ventilation of buildings, the cleansing of streets, are as sacred and urgent in their place as are religious rites in theirs. The general tendency of the reli-

gious life is to be towards health in all directions. And the larger duty includes the nearer and more immediate duty to the sick; while seeking to secure a larger health for the coming generation, we are bound by every consideration of Christian teaching and example to help those who in this generation are the victims of disease. If all objections be allowed, there are still left enough of the poor and helpless needing the help of hospitals to make an appeal which no heart of human sympathy can resist. The preacher's own experience in the government of an admirable provincial hospital has profoundly convinced him of the unbounded blessings which such institutions confer, and their appeal comes endorsed by the highest divine authority and the urgency of the deepest human need. They who have known within their own circle during the year one case of illness, with its anxieties, hopes, and joys, must by the aid of a sympathetic imagination endeavour to realise the thousands upon thousands of such cases which have been brought within reach of the great skill and wise patient nursing of our great hospitals."

WEST NORWOOD.

The Rev. H. Cooper preached from Rom. viii., 22, 23: "We know that the whole creation groaneth and travalleth in pain together until now. And not only they, but ..... even we ourselves, groan within ourselves, waiting for the adoption, to wit, the redemption of our body." "A marked change has passed over the material creation since it issued fresh from the hands of its great Creator. All was then in harmony, but sin has introduced an element of discord. This is noticeable even in the physical world; we trace it in the volcano, in the earthquake, in the hurricane—those fierce convulsions of nature which bring ruin and devastation in their train. Again, if we glance at the animal kingdom, see how many animals live only by the death of others weaker than themselves. The bird preys upon the insect, the kingfisher upon the glistening fish, the hawk swoops down upon the dove. Every blade of grass (could we see far enough) swarms with animal life which is maintained by the destruction of others; every bucket of water examined through a microscope reveals to us the tyrant and his victim, the pursuer and the pursued. Such are the echoes in the natural world of the mischief which has been wrought in the spiritual world. For man did not fall alone. The confusion which sin had introduced in his relations towards God is re-echoed in the confusion of nature's relations towards him. And if we turn to the higher sphere of human life which affects man himself, we trace still more clearly how 'the whole creation groaneth and travalleth in pain together until now.' It is as true now as it was in St. Paul's days, and will be until the end of time. Manners and customs may change, laws and languages may be modified as the generations succeed each other, but the day will never dawn upon this world of time when men shall be able to say, 'There is no sorrow.' Holy Scripture teaches the same truth. Human tales and poems often paint bright pictures and portray scenes of imaginary perfection, but the Bible dwells much on human misery. It speaks throughout of the vanity and unprofitableness of the world, its pleasures and enjoyments, and sheds a halo of sadness (so to speak) over the things of time. And does not experience teach us that, amid the brightest surroundings of human life, there is a deep under-current of sadness which every now and then comes to the surface. The music of marriage-bells gives place to the funeral knell (as we were reminded in the death of our Prince last winter). The sounds of holiday rejoicing are changed into voice of universal sorrow and lament (as we were so sadly reminded on our Whitsun Monday Festival), and the same truth is being daily experienced in every sphere of life. To this sad condition of things the only antidote is Christianity, which lightens all human ills, for it shows us the rainbow of God's mercy even in the darkest cloud and explains to us the divine meaning which underlies our earthly troubles. We must not take a pessimistic view of things. If it seem to us that suffering and death are out of harmony with the goodness and love of the Creator, let two thoughts bring us comfort: (1) That the strange arrangement by which life is evolved out of death is an 'acted parable,' as it were—a picture in the kingdom of nature of that death of Christ upon the Cross to which we owe our everlasting life. (2) That this present system of discord is only meant to be temporary, as nature suggests and revelation plainly teaches. For a day will come when universal harmony shall be restored, when there will be no wars between nations, no discord in the Church, no strife in the household. Yes, we are waiting, all of us, as the poet says, 'for some far-off divine event,' 'Towards which the whole creation moves.' This 'divine event' is described by the Apostle as the 'adoption, to wit, the redemption of the body.' When Christ came on earth He redeemed our souls; that was the first part of His work. For in this life the body is frail and feeble, liable to sickness, subject to death. But when Christ comes again, *then* will the redemption of the body take place. *Then* the whole of His work of redemption will be accomplished, when our mortal bodies shall be raised, changed, and glorified, 'according to the mighty working whereby He is able to subdue all things unto Himself.' I have chosen the subject of a 'suffering' creation to dwell upon this morning because your alms are asked to-day for the support of the metropolitan hospitals, and the strain of thought the words suggest seems especially suitable to the occasion. For when we think of the multitude of our sick and suffering brethren in this great city—not only the inmates of our hospitals, but the wider range of out-patients who are relieved thereby, and the still larger number of those who suffer in their comfortless homes because they cannot obtain admission to the wards—surely we find here an illustration of the Apostle's lament 'that the whole creation groaneth and travalleth in pain together until now.' And when we consider the varied forms of bodily suffering which exist among mankind—those acute disorders which suddenly prostrate their victim, those chronic complaints which slowly wear away the sufferer's life, that ever-increasing class of maladies which are especially produced by our highly organised civilisation and the desperate struggle for a livelihood, those accidents to which so many are liable in the ordinary work of their calling—when we think of all these, are we not reminded that the redemption of man's body is yet incomplete, and that we are waiting for our glorious manifestation as the 'sons of God' which shall more than compensate for all our sorrows here as the 'sons of men'? It is sad to feel that we can do nothing to remove this burden of suffering from our fellow-men. But we may do much to lessen it. God only can cure disease; He permits man to alleviate it. And how can we do this better than by helping to support those institutions established on purpose to minimise physical pain and distress? This year especially the hospital appeal should awaken a warm response in our hearts. Sorrow begets sympathy, and we have suffered (most of us) from the terrible visitation of influenza with which the country was afflicted last winter. Some of us were then laid low upon a bed of sickness and have been restored to health again. Some have suffered bereavement in the loss of dear ones whom we still mourn. Some of us have, in God's mercy, been spared from the dark shadow of disease and death, but in any case we owe a special acknowledgment to Almighty God for His many mercies vouchsafed to us. Let, then, your hospital offering to-day be a thankoffering to Him—let us 'comfort others as we ourselves have been comforted by God.'"

SS. MARY AND MICHAEL.

The Archbishop of Westminster, in preaching at SS. Mary and Michael's, Commercial-road, said that, although he was addressing a great congregation of working people, he called upon them to support the hospitals of London according to their means with as much heartiness as their richer fellow subjects. It was the working people who, beyond all others, benefited by these noble institutions, and he was sure they would all give a helping hand towards their maintenance. Last year the London hospitals had received 99,000 patients, and of these they had cured 44,000, while over 2,000,000 visits had been paid to out-patients. He was sorry to see that there were over 2000 beds that could not be occupied because the Sunday hospital collection fell far short of what was needed. Last year it had amounted to £45,000. The Lord Mayor was aiming at raising it to £100,000. This would meet the demand. Catholics had again and again proved their power of self-sacrifice in a good cause. The Archbishop called upon them to give proof to the whole of London that they appreciated the benefits which the hospitals afforded them by contributing every one of them

towards this great public charity, in which all shared irrespective of creed and nationality.

We may recall attention to the fact that, as stated in the letter from the Lord Mayor published in our Second Edition last week, a box for anonymous donations is placed outside the Mansion House as usual; any contributions from those who were absent from London or unable to attend a place of worship on Sunday will be gladly received and promptly acknowledged by his lordship.

ROYAL COLLEGE OF PHYSICIANS.

AN extraordinary comitia of the Royal College of Physicians was held on the 17th inst., the President, Sir Andrew Clark, Bart., in the chair. The meeting was chiefly called to consider communications from the Gresham University Commission and the report of the Committee thereon. This report was adopted with but slight modification, and on the nomination of the President the following Fellows were appointed to give evidence on behalf of the College before the Commission:—The President, the Registrar, Dr. N. Moore, and Dr. Allchin. It was stated that Mr. Hulke and Mr. Howse would similarly represent the Royal College of Surgeons.

Dr. Alfred Birch of Calcutta was elected a Fellow of the College.

The President announced that he had nominated Dr. Halliburton to deliver the Gulstonian Lectures for 1893, and Dr. C. T. Williams the Lumleian Lectures. Dr. Pavy had consented to be the Croonian lecturer for 1894.

The Rev. Dr. Wale Hicks was congratulated by the President on his appointment to a bishopric in Africa. The President's remarks were warmly endorsed by the Fellows present, and were replied to by Dr. Wale Hicks.

A letter was read from Mr. Gurner, thanking the College for their recognition of his services on the occasion of his retiring from the office of bedell.

THE RECENT RAILWAY COLLISION AT BISHOPSGATE.

THE following particulars have been furnished us of the cases, admitted into the wards of St. Bartholomew's Hospital, suffering from injuries sustained in the railway accident at Bishopsgate:—

Case 1: Age fifty-one. Scalp wound and scald; progressing favourably. Case 2: Age eighteen. Bruised and shaken; discharged. Case 3: Age thirty-two. Scalp wound and hæmatoma; discharged. Case 4: Age sixteen. Compound fracture, dislocation of right ankle, simple fracture of right femur, comminution of left tibia and fibula, scalp wounds, and suppuration of ankle-joint. Patient has rallied from the shock. Case 5: Age forty-two. Shock; discharged.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Liverpool Port District.—The past year was one of anxiety in this port, owing to the number of Russian and Polish Jews who passed through Liverpool and to the increase of small-pox. The number of vessels actually infected was 3662, of which 3294 were found in good condition; others required some cleansing or structural alterations. The various occurrences of infectious disease on board are discussed by Dr. Stopford Taylor, and it is pointed out that with a view to more efficient inspection, especially of persons landed on the quay after the vessels have been docked, an alteration in the quarantine law would be necessary. This subject has latterly received much attention in Liverpool. It is also pointed out that the arrangements under which no less than some 200,000 emigrants are annually inspected are not such as to conduce to accuracy of diagnosis, especially in the case of the early stages of infectious diseases.

Handsworth Urban District.—During 1891 the general death-rate for Handsworth was 13·5 per 1000, the zymotic rate being 1·35. The infectious hospital was used for the isolation of forty-two cases of scarlet fever, but apparently no other disease was admitted. The various sanitary circumstances associated with occurrences of infectious disease are described; and a series of typhoid fever cases is referred to in which the disease seemed to have a possible relation to the use of ginger beer from a certain house where a well-water was used which might have become contaminated by the burial of some pigs suffering from swine fever. Three other cases of typhoid fever had, however, occurred in the immediate locality during the preceding year. Water-closets are in some places being substituted for privy-middens, and other good sanitary work is in progress under Dr. J. B. Welch's supervision.

Barnsley Urban District.—Dr. M. T. Sadler records a death-rate of 26·0 per 1000 during 1891 as opposed to a mean of 22·8 for the preceding ten years, with a zymotic rate as high as 4·37, the excess being largely due to measles and whooping cough. Influenza, too, contributed to the excess in the general mortality rate. The Kendray hospital is more and more appreciated and its usefulness is gradually being extended. Amongst the new lines in which progress is being made is the abolition of privy-middens and the storage of filth consequent upon their use, together with the extension of the system of automatic flush closets attached to the dwellings of the working classes.

Dunbarton County Council District.—Dr. John C. M'Vail, well known as an authority on public health, has submitted a very complete report to the County Council and the district committees of Dunbarton, to which county he was last year appointed medical officer of health. The vital statistics are carefully studied, the climate, occupations, and other conditions tending to affect health and disease are discussed, and such subjects as water-supply, drainage, sewerage, and general sanitary administration are entered into in detail. In fact, the report very much resembles a typically complete report by an English health officer whose district covers a number of urban as well as rural districts; and it is probably the difference between the two portions of Great Britain in point of sanitary administration and duties of officers that makes this necessary. The report is well compiled and its educational value will, we trust, be considerable; at all events the material which it sets out cannot fail to be of much use to the localities with which it is concerned.

Fulham.—The death-rate for the parish of Fulham was 19·7 per 1000 last year, as compared with a rate of 21·4 for London as a whole. Amongst the cases of infectious disease coming under notice there were 78 of scarlet fever, 47 of diphtheria, and 47 of typhoid fever; and of these, 52, 23, and 18 respectively were removed to hospital for isolation purposes. Discussing the question of notification, Mr. Cooney is of opinion that measles should be made notifiable by way of experiment for two years. The experiment would probably be a wise one, but we are convinced that two years would be too short a time. What is wanted is to include at least two epidemic periods and two periods when there is but little measles. Then it would be possible to test the effect of the process by way of securing preventive measures in the case of first attacks. Two years would not suffice for this. Some five years probably would. A large number of local questions are discussed in Mr. Cooney's report; as are also certain general questions, such as intermitting and constant water services, trade nuisances and methods of refuse disposal. A considerable amount of information is also given as to local sanitary administration, and the report is calculated to excite a greater interest in the question of public health in the parish than has been manifested in some previous years.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 7264 births and 3473 deaths were registered during the week ending June 18th. The annual rate of mortality in these towns, which had declined from 19·4 to 17·8 per 1000 in the preceding three weeks, was again 17·8 last week. In London the rate was 17·1 per 1000, while it averaged 18·2 in the thirty-two provincial towns. The lowest rates in these towns were 11·2 in Hull, 13·3 in Croydon, 13·7 in Portsmouth, and 13·8 in Bradford; the highest rates were 21·7 in Halifax, 22·0 in Preston, 22·5 in Oldham, and 22·9 in Liverpool. The

3473 deaths included 513 which were referred to the principal zymotic diseases, against 455 and 466 in the preceding two weeks; of these, 196 resulted from measles, 96 from whooping-cough, 88 from diarrhœa, 59 from scarlet fever, 50 from diphtheria, 22 from "fever" (principally enteric), and 2 from small-pox. No fatal case of any of these diseases occurred last week in Norwich; in the other towns they caused the lowest death-rates in Croydon, Derby, Swansea, and Bradford, and the highest rates in Birkenhead, Halifax, Birmingham, and Bolton. The greatest mortality from measles occurred in London, West Ham, Nottingham, Birmingham, Birkenhead, Sunderland, and Halifax; scarlet fever in Bolton; whooping-cough in Huddersfield, Sheffield, Wolverhampton, Blackburn, and Preston; and diarrhœa in Plymouth, Bolton, and Leicester. The mortality from "fever" showed no marked excess in any of these large towns. The 50 deaths from diphtheria included 34 in London, and 2 each in Bristol, Liverpool, Bolton, Manchester, Salford, and Sheffield. One fatal case of small-pox was registered in London and one in Liverpool, but not one in any other of the large towns; 69 cases of this disease were under treatment in the Metropolitan Asylum Hospitals, and 9 in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1945, against numbers increasing from 1226 to 1878 in the preceding twelve weeks; 213 cases were admitted during the week, against 215 and 207 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding five weeks from 304 to 208, further fell to 202 last week, and were 41 below the corrected average. The causes of 87, or 2·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Croydon, Blackburn, Norwich, and in five other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Manchester, Salford, Preston, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·2 and 20·8 per 1000 in the preceding two weeks, declined again to 17·7 during the week ending June 18th, and was slightly below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·2 in Edinburgh and 14·1 in Leith to 20·6 in Perth and 21·2 in Glasgow. The 493 deaths in these towns included 27 which were referred to whooping-cough, 27 to measles, 6 to diarrhœa, 4 to scarlet fever, 2 to diphtheria, and not one either to small-pox or "fever." In all, 66 deaths resulted from these principal zymotic diseases, against 76 and 82 in the preceding two weeks. These 66 deaths were equal to an annual rate of 2·4 per 1000, which was 0·2 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 20 and 30 in the preceding two weeks, declined to 27 last week, of which 18 occurred in Glasgow and 3 in Edinburgh. The deaths referred to measles, which had been 32, 34, and 27 in the previous three weeks, were again 27 last week, all of which were recorded in Glasgow. The 6 fatal cases of diarrhœa showed a decline from those returned in recent weeks. The deaths from scarlet fever, which had been 7 and 6 in the preceding two weeks, further fell to 4 last week, all of which occurred in Glasgow, where the 2 fatal cases of diphtheria were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 123 and 124 in the preceding two weeks, declined last week to 94, and were as many as 49 below the number in the corresponding week of last year. The causes of 45, or more than 9 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the preceding four weeks from 34·6 to 24·0 per 1000, rose again to 31·6 during the week ending June 18th. During the first eleven weeks of the current quarter the death-rate in the city averaged 32·3 per 1000, against 19·2 in London and 18·0 in Edinburgh. The 212 deaths in Dublin during the week under notice showed an increase of 51 upon the number in the preceding week, and included 27 which were referred to measles, 5 to whooping-cough, 1 to diarrhœa, and not one either to small-pox, scarlet fever, diphtheria, or "fever." In all, 33 deaths resulted from these principal zymotic diseases, equal to an annual rate of 4·9 per 1000, the zymotic death-rate during the same period being 3·2 in London and 0·6 in Edinburgh. The fatal cases of measles, which had been 21 and 25 in the preceding two weeks, further increased to 27 last week. The deaths referred to whooping-cough, which had declined from 6 to 1 in the previous three weeks, rose again to 5 last week. The 212 deaths registered in Dublin last week included 32 of infants under one year of age, and 38 of persons aged upwards of sixty years; the deaths of infants showed a decline, while those of elderly persons showed a marked increase upon the number recorded in the preceding week. Six inquest cases and 4 deaths from violence were registered; and 76, or more than one-third, of the deaths in the city last week were not certified.

THE SERVICES.

BRIGADE-SURGEON W. SKUES, M.D.

WE regret to have to announce the death of Brigade-Surgeon W. Skues, M.D., Surgeon-Major, Retired List, Army Medical Staff, at Shrublands, Linden-grove, Nunhead, on the 10th inst., aged sixty-four years. He joined the Army, July 29th, 1853; became Surgeon, July 8th, 1860; Surgeon-Major, March 1st, 1873; and retired with the rank of Brigade-Surgeon, Dec. 2nd, 1881. He was Principal Medical Officer of the expedition from Aden into Arabia against the Arabs in 1865–66.

ARMY MEDICAL STAFF.

Surgeon-Major A. A. Lyle has been posted for duty to the Station Hospital, York.—Brigade-Surgeon-Lieutenant-Colonel G. Andrew has been posted to the charge of the South Station Hospital, Secunderabad, and Surgeon-Major G. D. Bourke has been posted to the charge of the Central Station Hospital, Secunderabad.—Surgeon-Captains G. B. Russell and C. A. Young, doing duty in Burmah, have been ordered to Wellington and Bungalore respectively, Madras command.—Surgeon-Lieutenant-Colonel H. T. Brown, M.D., to be Brigade-Surgeon-Lieutenant-Colonel, vice C. S. Close, retired.

NAVAL MEDICAL SERVICE.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Henry Scott Lander has been placed on the Retired List, with permission to assume the rank of Deputy-Inspector-General of Hospitals and Fleets (dated June 15th, 1892); Fleet Surgeon Geo. Bolster has been placed on the Retired List at his own request, with permission to assume the rank of Deputy-Inspector-General of Hospitals and Fleets (dated June 16th, 1892).—The following appointments have been made at the Admiralty:—Fleet Surgeons: I. H. Anderson to Plymouth Hospital (dated June 11th, 1892); R. A. Mowll, M.D., to the *Duke of Wellington;* B. Renshaw to the *Defiance*, and R. Turner to the *Euphrates* (all dated July 8th, 1892). Staff Surgeons: H. A. W. Richardson to Plymouth Hospital (dated June 11th, 1892); H. W. D. Walsh to the *Hecla* and R. Bentham to the *Neptune* (dated July 2nd, 1892); A. L. Christie, M.B., to the *Serapis*, and T. D. Gimlette to the *Anson* (both dated July 8th, 1892); and A. C. Queely to the *Triumph* (dated June 16th, 1892). Surgeons B. S. Mends and J. L. Thomas to the *Excellent*, additional; J. C. Wood to the *Alecto;* H. W. Macnamara and H. E. L. Earl to the *Pembroke*, additional (all dated June 11th, 1892).

YEOMANRY CAVALRY.—Denbighshire (Hussars): Richd. Williams, Gent., to be Surgeon-Lieutenant (dated June 18th, 1892).

MILITIA MEDICAL STAFF.—Surgeon-Lieutenant-Colonel W. Malcomson, 4th Battalion, Princess Victoria's (Royal Irish Fusiliers), resigns his commission; also is permitted to retain his rank and to wear the prescribed uniform on his retirement.

VOLUNTEER CORPS.—*Rifle:* 1st Volunteer Battalion, the Royal Warwickshire Regiment: Surgeon-Lieutenant T. G. McLauchlan, M.B., resigns his commission (dated June 18th, 1892).—3rd (Cambridgeshire) Volunteer Battalion, the Suffolk Regiment: Surgeon-Captain W. R. Grove, M.D., to be Surgeon-Major (dated June 18th, 1892).

METROPOLITAN HOSPITAL SUNDAY FUND, 1892.

WE have received, at the time of our going to press on Thursday evening, returns from a number of metropolitan places of worship giving the amounts collected last Sunday in aid of the Hospital Sunday Fund.

	£	s.	d.
St. Michael, Chester-square (per Rev. Canon Fleming, B.D.)	1208	15	3
St. Paul's Cathedral (Dean Gregory)	216	7	9
Delta (a further)	200	0	0
A. A. C. (a further)	200	0	0
J. A. J.	200	0	0
G. W. Medley, Esq. (a further)	30	0	0
Percy Ricardo, Esq. (a further)	25	0	0
Mrs. Burnaby (a further)	20	0	0
St. Mary's Old Church, Stoke Newington (Rev. Prebendary Shelford)	33	17	1
St. Matthew's, Denmark-hill (Rev. J. R. Porte, D.D.)	65	6	4
St. Paul, Mill-hill (Rev. H. V. Cowper)	21	7	2
St. Matthew, Brixton-hill (Rev. N. A. Garland)	83	1	0
Lady Tilson (a further)	50	0	0
St. Saviour's, Clapham (Rev. C. P. Greene)	38	14	0
All Saints, Upper Norwood (Rev. James Watson)	27	12	11
St. Anne, Highgate-rise (Rev. C. T. B. Acland)	25	4	7
Miss Emily Old	25	0	0
Holy Trinity, Tulse-hill (Rev. E. L. Roxby)	97	0	0
H. A. Soames, Esq. (a further)	25	0	0
Gower-street Baptist Chapel (Mr. R. Link)	20	3	2
Box outside Mansion House	20	7	8
National Secular Society (open-air collection, Finsbury Park)	17	11	0
Holy Trinity, Kilburn (Rev. Canon Money)	31	13	2
Clapton Park Congregational Chapel (Rev. W. J. Woods, B.A.)	39	3	10
Camberwell Parish Church (Rev. F. F. Kelly)	65	17	3
St. Philip's, Sydenham (Rev. A. Edmund King)	37	8	8
St. Paul's, Kilburn (Rev. Dr. Bonavia Hunt)	40	19	2
St. Luke's, West Holloway (Rev. R. Glover)	48	0	0
St. James's, Garlickhithe (Rev. L. Gibbs)	26	13	4
St. Mary Brookfield, Highgate-rise (Rev. D. J. Twemlow Cooke)	27	12	0
St. Mary Magdalene, Enfield (Rev. G. P. Turner)	28	12	1
St. Stephen's, Hampstead (Rev. J. Kirkman)	44	4	0
Carmelite Church, Kensington (Rev. Father Badger)	24	15	0
Malden, Surrey, Parish Church (Rev. Canon Stapylton)	37	18	4
St. Paul's (Presbyterian), Westbourne-grove (Rev. Dr. Morison)	77	9	4
St. James's, Camberwell (Rev. J. Dixon Dyke)	36	5	6
St. Andrew's, Thornhill-square (Rev. A. J. Bridgman)	22	0	0
Dutch Church, Austin Friars (Rev. A. D. Adama van Scheltema)	29	12	3
St. Andrew's, Holborn (Rev. H. Blunt)	21	7	5
Islington Presbyterian Church (Rev. J. Thain Davidson, D.D.)	24	14	10
Holy Trinity, Lyonsdown (Rev. E. Gardner)	28	11	4
Central-hill Baptist Chapel, Upper Norwood (Rev. S. A. Tipple)	33	10	4
Anonymous, per Robarts, Lubbock, and Co.	200	0	0
Christ Church, Southgate (Rev. James Baird)	43	0	6
Regent-square Presbyterian Church	102	6	2
Chislehurst Parish Church (Rev. Canon Murray)	262	5	7
B.C.F.N.I.	100	0	0
Curzon Chapel, Mayfair (Rev. T. Filmer Bennet)	305	0	0
St. James's, West Hampstead (Rev. Charles Mc Anally)	307	8	7
St. George's Parish Church, Beckenham (Rev. Henry Arnott)	61	9	6
Elstree Parish Church (Rev. P. Peach)	32	5	9
Wanstead Churches (Rev. M. Drummond)	42	1	0
East London Christian Evidence Society	23	10	2
Stoke Newington Parish Church (Rev. Prebendary Shelford)	73	15	2
Christchurch, North Brixton (Rev. W. R. Mowl)	53	14	3
St. Mary Boltons (Rev. W. J. Du Boulay)	58	9	6
Coldharbour Parish Church (Rev. J. Rooker, jun.)	20	15	6
St. Mary Shortlands (Rev. H. F. Woolley)	41	5	4
F. G. D. (a further)	50	0	0
St. Matthew's, Westminster (Rev. W. B. Trevelyan)	22	0	0
St. Peter's, Vere-street (Rev. W. Page Roberts)	297	7	7
Eltham Parish Church (Rev. W. J. Sowerby)	34	10	2
St. Mary's, Monken Hadley (Rev. F. C. Cass)	31	0	0
The Oratory, South Kensington (Very Rev. W. T. Gordon)	41	11	0
Crosby Lockwood, Esq. (a further)	21	0	0
C. H. T. Hawkins, Esq. (a further)	21	0	0
Major Jones (a further)	20	0	0
St. Thomas's, Portman-square (Rev. R. P. Thompson)	106	19	4
Westminster Abbey (Very Rev. Dean Bradley, D.D.)	179	9	4
Hampstead Parish Church (Rev. S. B. Burnaby)	62	7	8
Abney Congregational Church, Stoke Newington (Rev. W. Spensley)	25	7	5
St. Stephen's, Canonbury (Rev. John Parry)	31	10	8
St. Mary's, Hornsey-rise (Rev. W. S. Lewis)	42		0
New Court Congregational Chapel, Tollington-park (Rev. W. Pierce)	33		14
Dulwich College Chapel (Rev. G. W. Daniell)	57	5	0
St. Giles's-in-the-Fields (Rev. Canon Nisbet)	36	13	8
St. Philip's, Regent-street (Rev. Prebendary Harry Jones)	25	6	3
Park Chapel, Camden Town (Rev. H. Coley)	36	11	2
St. Paul's, Balls-pond (Rev. J. H. Shaw)	31	18	9
St. Anne's, Soho (Rev. J. H. Cardwell)	50	13	5
Holy Trinity, Lee (Rev. W. B. Bucke)	35	0	0
Blackheath Wesleyan Church (Rev. Owen Davies)	23	6	6
Gray's-inn Chapel (Rev. J. H. Lupton)	42	8	6
St. Pancras Parish Church (Rev. H. L. Paget)	49	16	7
St. Margaret's, Westminster (Ven. Archdeacon Farrar, D.D. &c.)	224	2	0
St. Mark's, North Audley-street (Rev. J. W. Ayre)	214	10	0
Temple Church (Very Rev. Dean Vaughan)	211	1	2
Marylebone Presbyterian Church (Dr. Pentecost)	100	0	0
St. Paul's, Great Portland-street (Rev. C. G. Williamson)	43	0	0
St. Stephen's, South Dulwich (Rev. J. M. Clark)	145	17	4
Woodford Parish Church (Rev. A. Hughes)	21	1	3
Hammersmith Parish Church and Missions (Rev. J. H. Snowdon)	39	14	4
St. Peter's, Islington (Rev. C. J. Procter)	20	5	1
All Saints, Friern Barnet (Rev. H. S. Miles)	40	7	8
Ewell Parish Church (Rev. J. Thornton)	39	4	0
West Wickham Parish Church (Rev. H. Bertie Roberts)	25	10	10
St. George's, Bickley (Rev. R. Wood)	56	16	0
Effra-road Unitarian Church, Brixton (Rev. W. M. Ainsworth)	63	7	6
St. Saviour's, Ealing (Rev. W. Ranger)	30	19	6
Mitcham Parish Church (Rev. D. F. Wilson)	26	2	1
Bromley (Kent) Parish Church (Rev. A. G. Hellicar)	89	0	9
St. John's Presbyterian Church, Kensington (Rev. Charles Moinet, M.A.)	86	10	0
Julian Senior, Esq. (a further)	25	0	0
St. Mark's, Reigate (Rev. A. Simmonds)	33	10	0
St. Luke's Parish Church, Chelsea (Rev. Gerald Blunt)	43	10	0
Lewisham High-road Congregational Church (Rev. J. Morley Wright)	20	16	11
Barnes Parish Church (Rev. B. M. Kitson)	35	17	6
St. James the Less, Westminster (Rev. Canon Blackley)	33	15	9
St. Mary Magdalene, Munster-square (Rev. F. J. Ponsonby)	23	17	8
Clapton Wesleyan Church (Rev. J. Dixon)	21	11	7
Holy Trinity, Blackheath, and Missions (Rev. S. F. Hooper)	37	12	10
Park Church, Highbury (Rev. John Edmond, D.D.)	27	0	0
St. Paul's, Paddington (Rev. H. V. H. Cowell)	34	7	1
Crouch Hill Presbyterian Church (Rev. J. B. Meharry, B.A.)	48	5	2
Lyndhurst-road Congregational Church (Rev. R. F. Horton, M.A.)	50	18	2
Highbury Quadrant Church (Rev. S. Pearson, M.A.)	27	9	8
Denbigh-road Wesleyan Chapel, Bayswater (Rev. Josiah Banham)	26	10	0
Craven Chapel, Foubert's-place, Regent-street	7	8	0
Nutley-lane Church, Reigate (Rev. Montague Hobbs)	8	6	0
St. Matthew's, Canonbury	14	4	5
St. David's, West Holloway (Rev. Edward Doveton)	13	6	0
Forest Hill Congregational Church (Rev. R. Alex. Johnson)	8	16	1
St. George's, Westcombe Park, Blackheath (Rev. H. K. Soames)	30	4	3
St. John the Evangelist, Brownswood-park, Hornsey, N.	25	2	1
Loughborough Park Congregational Church, S.W. (Rev. J. A. Joyce)	7	7	0
Corpus Christi College Mission, 32, New Cross-road, S.E. (Rev. W. W. Hough)	7	9	4
St. Barnabas, Addison-road, Kensington (Rev. G. R. Thornton)	133	11	2
St. Paul's, Harringay, N. (Rev. J. H. Greaves)	19	9	9
St. Saviour's, Forest Hill (Rev. A. O. Napeh)	16	8	3
St. Mary of the Angels, Westmoreland-road, Bayswater (Rev. M. Wyndham)	8	0	0
Chelsfield Parish Church (Rev. T. W. Nutt)	10	3	8
Liverpool-road Wesleyan Chapel (Rev. John Evans)	10	0	0
St. Michael's, Paddington (Rev. G. F. Prescott)	173	8	7
The Old College Chapel, Dulwich (Rev. G. W. Daniell)	57	1	2
St. James's, Walthamstow (Rev. E. T. Hamel)	6	7	2
St. Mary the Virgin, Primrose-hill (Rev. A. Spencer)	44	1	4
Great Queen-street Wesleyan Chapel	9	4	3
South Hackney Parish Church (Rev. V. R. Lennar)	18	17	6
St. Mary Magdalene, Wandsworth-common, S.W.	16	7	10
Swiss Church, Endell-street (Rev. Alb. Roerich)	9	11	0
St. James's, Camberwell	36	5	6
St. Clement's, Notting-hill	8	0	0
Weald Church, Sevenoaks (Rev. E. K. S. Morgan)	5	4	5
St. John's Church, Enfield St. Luke's Church, Enfield	12	8	5
St. Andrew's, Stoke Newington (Rev. J. E. J. Bevan)	96	1	9
St. Augustine's, Kilburn (Rev. E. C. Kirkpatrick)	58	12	8
St. Matthew's, Yiewsley (Rev. H. Francis)	12	2	0
Capland-road Wesleyan Church, Hackney (Rev. A. H. Vine)	12	15	8
St. Bartholomew's, Camberwell (Rev. H. Wells)	6	15	11
St. Marylebone Parish Chapel (Rev. E. Thomas, M.A., B.C.L.)	18	0	0
St. Peter's, Page-green, Tottenham (Rev. E. B. Scott)	5	3	10
St. Mary of Eton, Eton, Mission (Rev. St. Clair Donaldson)	9	10	6
Hendon Baptist Chapel (Rev. G. D. Hooper)	7	5	4
St. Laurance, Catford S.E. (Rev. E. C. Robinson)	26	6	2
All Saints, Clapham Park	42	0	3
Covent Garden (Rev. S. F. Camberley)	6	4	3
Christ's Church, Mayfair (Rev. H. Rowsell)	103	16	0
Canning Town Congregational Church (Rev. T. W. Neoland)	8	10	0
Dormansland Church (Rev. J. A. Purvis)	7	10	9
Christ Church, Greenwich (Rev. A. Hamilton Baynes)	39	5	2
Parish Church, Hampstead (Rev. S. B. Burnaby)	62	7	8
St. John's, Isleworth, W. (Rev. G. B. Gordon Stokes)	12	12	0
St. Columba's, Pont-street	102	12	10
Parish Church, Shenfield (Rev. W. Quennell)	15	0	9
"Persis" (special)	5	0	0
St. Jude, Bethnal-green (Rev. Wilfred H. Davies)	4	16	6
St. John's, Hendon, N.W. (Rev. W. H. Shaw)	4	15	7

Other subscriptions have been received, and will be announced in our next list.

Correspondence.

"Audi alteram partem."

THE TREATMENT OF SPASMODIC TORTICOLLIS BY NEURECTOMY.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of June 18th particulars are given by four different writers of cases of spasmodic torticollis treated by removal of a portion of the spinal accessory nerve. In an editorial note on one of the cases it is remarked: "It is still too early to assign its just position to this operation. ..... It is only when the after histories of the whole have been ascertained that a fair judgment of this method of treatment will be possible."

Having now performed this operation on ten occasions, I may perhaps be allowed to state that, in my experience, the results are extremely satisfactory, as in a large proportion of cases there is no recurrence of the spasm.[1] Several of my cases have been lost sight of, two have been operated upon very recently, but in four which are still under observation, where intervals varying from eight to two years have now elapsed since operation, the relief from spasm which followed its performance has been permanent.

I am, Sirs, yours faithfully,

Manchester, June 20th, 1892. F. A. SOUTHAM.

DEATH UNDER CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—Enclosed is a very poor account of the case of chloroform death. I have made my house surgeon's notes as readable as I can, but I cannot personally vouch for their accuracy, except as to the order in which attempts at restoration were applied, and as to the short time—about five minutes—which intervened between the commencement of the anæsthetic and cessation of breathing. I was in the operating theatre, but scarcely saw the man until the moment of alarm. I am quite confident that the death began at the brain centre, which presides over respiration, and that the patient was *irrecoverably dead* from the moment when his breathing first ceased. The following is an account of the case.

The patient, aged fifty-two years, was admitted into Queen's Hospital on May 31st, under the care of Mr. Jordan Lloyd, for the purpose of having an exploratory operation on the right kidney for the relief of some painful malady which had disabled him from work and which had persisted for many months. He was a thick-set, muscular man, of middle height, and inclined to be stout. During his stay in the hospital his various organs were examined, and it was noted that the "heart sounds were normal, but somewhat feeble; apex displaced slightly outwards, and that there were moist sounds over the bases of each lung."

On June 11th pure chloroform was administered in the usual way, on a double fold of lint, by the house surgeon, Mr. Stead. For about three minutes the patient took the anæsthetic well, but then began to struggle rather violently. This struggling lasted two or three minutes, and the patient then began to lose consciousness. He breathed quietly and well for about another minute, when respiration suddenly ceased, and he became livid. The whole period of the anæsthetisation was not more than five minutes, and the operation had not been commenced. The pulse could be felt, and the pupils were less than a line in diameter. Restorative measures were applied for more than half an hour and in this order: inversion, artificial respiration (Howard's and Silvester's), faradisation, heart puncture, venesection, tracheotomy, and direct lung inflation. During these efforts at restoration patient gave one or two feeble gasps, the pulse was lost at wrist almost at once, and pupils dilated towards the end of the fifth minute.

The post-mortem examination of thoracic organs showed that the blood was fluid; the inferior cava and its tributaries were loaded with blood much more so than the superior cava and its branches; the heart was somewhat fatty, dilated, and flabby; tricuspid and mitral valves dilated; the aorta was healthy; the lungs both intensely congested with œdema of right base, the left base was bound down extensively by old adhesions.

I am, Sirs, yours faithfully,

Birmingham, June 22nd, 1892. JORDAN LLOYD.

[1] Brit. Med. Jour., July 11th, 1885, Jan. 31st, 1891.

COPPERED GREEN PEAS.

To the Editors of THE LANCET.

SIRS,—Are you quite sure you are correct in saying, with reference to the use of sulphate of copper in greening vegetables, that "the French Government have prohibited its use in this way so far as home trade is concerned, although they permit the adoption of the *reverdissage* process where the peas are intended for export purposes only"? I am aware that this has been suggested in expert reports, but not that it has ever been officially recognised. More especially also in 1890 I obtained from the British Embassy in Paris a copy of the circular of April 18th, 1889, issued by the French Government, withdrawing the prohibition hitherto existing as the result of the report of M. Grimaux adopted by the Consulting Committee of Hygiene of France, to the effect that "there was no reason for continuing the prohibition on the ground of injury to health." Last year I again communicated with the British Embassy to ascertain if any change in the position had taken place, and was informed that the decree of April, 1889, was the last, and was still in force. As to the present position of this question in this country, it is extremely unsatisfactory, and in my opinion there are only two remedies: either to lighten the burden of proof by making Section 3 of the Adulteration Act read, "so as to render the article dangerous or injurious to health," or by enacting *simpliciter* that no article of food shall be coloured with substances injurious to health, defining such substances so as to include the various metallic and other poisons. This is the straight and sensible method adopted by the German Empire, by the State of Massachusetts and other countries.

I am, Sirs, your obedient servant,

J. B. RUSSELL.

Sanitary Department, Glasgow, June 20th, 1892.

To the Editors of THE LANCET.

SIRS,—*Apropos* of your remarks on this subject in the current issue of THE LANCET, I would instance a case which was lately brought under my notice in which griping pain and diarrhœa were experienced after dinner and on inquiry it was found that the peas in question had been partaken of largely. But it has been affirmed by some that leguminate of copper is insoluble in the stomach and by others that the copper absorbed is so small in quantity as to be practically harmless. The latter supposition can, of course, only be true to a limited extent. Regarding the digestibility of these peas, in the careful research of Drs. Charteris and Snodgrass, to which you refer, it is clearly demonstrated that leguminate of copper is readily soluble in artificial digestants. That leguminate of copper is therefore soluble in the gastric juice is placed beyond reasonable doubt. But in these experiments the peas were (*a*) digested for one hour, and (*b*) digested alone. It might no doubt be urged that in the case of human consumption the peas are usually associated with large quantities of food and that they might thus escape the action, or the full action, of the available gastric juice during the time the food mass was permitted to remain in the stomach. Any undissolved leguminate of copper would, however, be further submitted to the action of the pancreatic juices which the above experiments have shown to be equally capable of dissolving it. It would indeed be interesting to learn how in the light of these experiments the digestibility of leguminate of copper in the human stomach can be disproved; and until such can be done, it is legitimate to regard the symptoms referred to as due to copper poisoning.—I am, Sirs, yours faithfully,

June, 1892. M.D.

RECTAL INJECTIONS OF SALT SOLUTION FOR HÆMORRHAGES.

To the Editors of THE LANCET.

SIRS,—Dr. R. F. Gill recommended (THE LANCET, Nov. 3rd, 1888), in cases of hæmorrhage, the injection per rectum of tepid salt solution at the rate of two or three

ounces every ten or fifteen minutes. Supposing all the fluid to be absorbed, it would, at this rate, take *two hours* for that quantity to enter the circulation, which is the minimum found to produce benefit in some cases of intravenous injection. There is good reason to believe that, in the collapse attending *severe* hæmorrhage, rapid absorption does not take place from the intestinal tract. Case 7 in my paper shows the superiority of intravenous over rectal injection. Nevertheless, *hot* saline fluid is a useful stimulant in some of the less grave cases.

I am, Sirs, yours faithfully,

Mansfield-street, W., June 20th, 1892. HERBERT R. SPENCER.

EPIDEMIC DERMATITIS.

To the Editors of THE LANCET.

SIRS,—It may interest some of your readers to know that the epidemic dermatitis, of which 163 cases occurred last year in the Paddington Infirmary and in the adjacent workhouse, has again visited us, though in a milder form and with fewer cases. Indeed, the cases this year would almost have passed unnoticed had we not been on the look out for it. The epidemic appeared for the first time in this infirmary about the end of May last year, and there are now some six or eight cases among the patients in the wards. All but two of these had the disease last year. The disease has exactly the same features which I have already described, and terminates as usual in profuse exfoliation of the epidermis. It is in the hope that some of your readers will do me the favour to come and see the cases, and that we may thus obtain more light on the subject, that I have ventured to trouble you. I will not trespass further on your indulgence, except to add that the disease has also, as I am informed, reappeared in a neighbouring infirmary and hospital.—I am, Sirs, yours faithfully,

Paddington Infirmary, W., June 20th, 1892. THOS. SAVILL.

MALARIA IN ROME.

To the Editors of THE LANCET.

SIRS,—In your article on "Malaria in Italy" the curious fact is quoted that the most densely peopled and filthiest regions in Rome suffer least, while the less crowded suburbs where the houses are few, well built, surrounded by gardens and apparently answering the conditions required for perfect salubrity are extremely unhealthy. It is interesting to note that in the first century of our era a similar incidence of sickness was observed. Up to the time of the calamitous fire in the reign of Nero the city was built in close, narrow winding streets and alleys, the houses usually varying in height from sixty to seventy feet (*vide* Livy and Strabo). After the fire wide streets were laid out and it was an ordinance that "every house should be enclosed by its own walls." Tacitus (Annals, B. xv.), commenting on the improved appearance of Rome, says: "These regulations, which were favourably received in consideration of their utility, were also a source of beauty to the new city; yet some there were who believed the ancient form was more conducive to health, as from the narrowness of the streets and the heights of the buildings the rays of the sun were more excluded, whereas now the spacious breadth of the streets, without any shade to protect it, was more intensely heated in warm weather." Brotier, in a note on this passage, remarks that in his time there were more patients during the hot weather in the wide thoroughfares of Rome than in the narrow places.

I am, Sirs, your obedient servant,

West Brighton, June 21st, 1892. WATKIN W. JONES.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

To the Editors of THE LANCET.

SIRS,—Permit me to observe in reply to the annotation in THE LANCET of the 18th inst. that there are about 5000 medical men practising in what may be termed the London district. As far as I can judge at present over 1000 of these are of opinion that such a society having a central office and council in London is needed, and, still more, acknowledge that, admitting the necessity of such a society, there is no centre equal to London for its successful working, and that London ought in the matter of medical protection to "run second" to no other town. The protection of a member, experience shows, can be more cheaply and efficiently conducted in London. We can there, at the minimum of expense and trouble, obtain the services of a staff of experts. This to men whose time is not merely money, but spent in a great part often without fee in performing onerous and valuable public services, is important both to the experts themselves and to the suffering public. At our head, forming the legal directory, are men of the highest position in all, or nearly all, branches of the profession, and we have the active sympathy and support of others of equal eminence whose names do not appear on our articles &c., but who are ready to help us in defending any wronged and suffering brother. All roads lead to London; from personal experience I know that it is often easier and less expensive to run up to London, and down to any provincial centre, than to attempt the cross-country route, even where one exists, with its delays and other disadvantages. For London men, with their immediate neighbours, the question is a double one. If in trouble or difficulty, would you rather be able to consult in London the chairman of our Emergency Committee, who has power to at once summon a meeting of able men residing within easy reach of his house, and empowered to advise or authorise preliminary steps to be taken to defend you, or go to some distant centre for that purpose?

I am, Sirs, yours obediently,

GEORGE B. MEAD,
Hon. Sec. London and Counties Medical Protection Society.

June 20th, 1892.

CENTRAL AFRICAN THERAPEUTICS.

To the Editors of THE LANCET.

SIRS,—I read with great interest your note on the above subject, but I cannot agree that religious progress will in any way aid in expelling superstition. History tells us that just in proportion to the intensity of religious feeling in a people is the spread of superstition. Had Mr. Currie's views appeared in a reactionary journal they would not have called forth a letter; but in a scientific journal like THE LANCET they are out of place and require notice. Besides all this, are we not making too much of our superiority over African superstition? In 1863 a man was drowned at Hedingham in Essex for being a wizard, and have we not examples enough in English history of barbarities for witchcraft without resorting to Central Africa? What might be said of the murder of Ruth Osborne and her husband at Tring in Hertfordshire, Aug. 22nd, 1751? What is to be thought of the brutality with which James I. had Fian, the Saltpans schoolmaster, murdered for witchcraft, Jan. 26th, 1591? When James I. brought home his bride from Denmark thirty persons were put to death for raising a storm at sea by witchcraft whilst he was on his journey. The few persons sacrificed in Africa for witchcraft sink into insignificance when we contemplate the nine millions of victims sacrificed by Christian Europe, according to Sprengel. Space would not allow of my recounting the Rev. Cotton Mather's witch-hunting in Salem; but before leaving the subject I will just mention that the statute against witchcraft in Ireland was not repealed until 1821. As an evidence of religion promoting superstition, need I do more than mention the exorcism in Edward VI.'s "Book of Common Prayer"; the function of the "laying-on of hands" for the royal touch; the services of Lourdes and such shrines? How religion has retarded medical progress is told in the lives of the earlier anatomists, the closure of anatomy rooms in George's reign, and the hysterical outcry against vivisection and the regulation of prostitution. Medicine is promoted by the advance of science, and superstition flies from the whistle of the steam-engine and the brightness of the electric light.—I am, Sirs, yours truly,

Dublin, June 18th, 1892. GEORGE FOY, F.R.C.S.I.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—The nonsense written by me has one advantage over that written by Mr. Lawson Tait—inasmuch as it happens to be true, whereas in his last letter to you he

makes a statement which has not this distinction. While it is the fact that he obtained and paid for counsel's opinion on the question of appeal, it is also the fact that he afterwards wrote stating his intention of deducting the amount so paid from a sum of £100 which he had all along promised in aid of the legal costs, "provided that the case was fought out to the end," and of which sum he has up to the present time only contributed one half. It is obvious, therefore, that he did not pay for the opinion, but has made the committee do so, although they had voted against any such expenditure as being unnecessary.

I am, Sirs, yours faithfully,

June 21st, 1892. W. G. DICKINSON.

THE VENICE SANITARY CONFERENCE.

A WELL-INFORMED correspondent writes from Paris:—"Considerable doubt still prevails as to the results of the negotiations between the representatives of Great Britain and of France concerning the protocol drawn up by the Venice Sanitary Conference, and which had been accepted by all the nationalities represented with the exception of England and Turkey. The negotiations held in Paris were prolonged, and their lengthy duration gave rise to rumours of an unfavourable description. After calling upon some of the representatives present at the Paris meeting, I am able to affirm positively that there was no disagreement, and that the negotiations have been brought to a satisfactory conclusion. If the negotiations in Paris were of lengthy duration, this was not due so much to difference of opinion as to the desirability of establishing clearer definitions. Lord Salisbury, it appears, feared that if at any future time English influence in Egypt should not be as powerful as it is at present, the local authorities might interpret the clauses of the Venice protocol in a manner calculated to damage the interests of Great Britain. The English representatives were therefore anxious that the meaning of the words employed should be so clearly defined as to preclude the possibility of different interpretations. The term "suspect" was particularly open to this objection. It is now, however, clearly established that a person to be "suspect" must have been in personal contact with a cholera patient. The terms of the Venice protocol, which have already been published in THE LANCET, remain intact for ships that have neither disinfecting-stove nor surgeon on board; but modifications of practical importance have been introduced to the advantage of ships which have on board stoves where disinfection by steam under pressure can be applied and which carry a fully qualified medical attendant. For ships thus provided great facilities for transit through the Suez Canal will be accorded. The persons who have been in contact with a cholera patient may be landed at the Wells of Moses while the part of the ship they occupied and all their clothes and personal effects are disinfected. They may then return on board and remain on board during the period of observation, which is fixed at a maximum of six or seven days. But if these persons can be persuaded to remain on shore altogether, then the ship, after disinfection, may at once proceed on its journey. The "suspected" persons landed would, in that case, continue their journey in some other ship. At the suggestion of the English representatives it was agreed that, instead of landing "suspected" persons, they might be placed on board a pontoon, which would be anchored off the Wells of Moses for that purpose. As, however, such cases will only occur at very rare intervals, it is not likely that the expense of establishing a pontoon will be incurred. The negotiations held in Paris had also for object the conferring on the local sanitary authorities the right to use their discretion in not detaining for too long a period ships on which cases of cholera have occurred during the passage. The detention of such ships is never to exceed six to seven days since the occurrence of the last case of cholera. The time occupied in travelling is to be reckoned, so that a ship, for instance, having a case of cholera on board three days previously to its arrival at the Wells of Moses would not be detained under observation at this station for more than three or four days; and, as already mentioned, would not be kept longer than twenty-four hours, if all the "suspected" persons consented to land and wait for another ship. One of the most practical advantages resulting from the Venice protocol is the abolition of detention formerly imposed upon ships that came from ports where cholera prevailed. These ships will now be allowed to proceed through the Canal at once if there be no case of cholera on board. Inasmuch as in actual practice cases of cholera very rarely occur on board ship, but, on the other hand, ships frequently come from ports where cholera prevails, it will be seen that the new regulations remove the principal obstacle to easy transit through the Canal. As all these stipulations have now been accepted by the British Government, it is considered that the other powers are not likely to raise any objection, and that the protocol—as drawn up at Venice and amended in Paris—will soon be signed and have the force of law. Some surprise and much satisfaction are expressed at the willingness with which the English Government consented to the modification of the constitution of the Alexandrian Sanitary Commission, though this alteration gives England a smaller representation on the Commission. This, however, renders the Commission more international in its character, and for this reason gives greater satisfaction to the various continental powers concerned."

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Election of Honorary Assistant Medical Officers to the Royal Infirmary.

ON the 16th inst. the newly created Election Committee of the Royal Infirmary met for the first time in its boardroom for the purpose of electing one honorary assistant physician and two honorary assistant surgeons. The committee is composed of the members of the general committee, the physicians, the surgeons of the infirmary, the two surgeons of the Lock Hospital, and a number of trustees—i.e., subscribers of two guineas and upwards, or donors of thirty guineas and upwards—annually elected, bringing up the total number to ninety-five. Of these upwards of fifty attended. For the assistant physicianship there were seven candidates; for the two assistant surgeoncies five. The election was by ballot, and, at its conclusion, the chairman announced that Dr. Thomas Robert Bradshaw had been elected assistant physician and Messrs. Geo. Gibson Hamilton and Wm. Thelwall Thomas, assistant surgeons. Mr. Hamilton's election will cause a vacancy in the office of surgeon to the Northern Hospital, which is also to be filled by an election committee. To the candidates this new mode of election is a great economy as well as free from the odious duty of canvassing trustees. The general impression appears to be that it is a very great improvement upon the former mode of election.

Declarations of Stillbirth.

The Births and Deaths Registration Act of 1874 contained a clause regulating the burial of stillborn infants, requiring the production of a medical certificate or a declaration signed by some one of a number of persons specified, and enacting heavy penalties for any breach of this law. But unfortunately there was no form of medical certificate or of declaration given in the Act or its schedules, these being left to the practitioners giving the certificates or to the persons making the declaration. This latter it must be observed is not a statutory declaration requiring the attestation, but a declaration in the same sense as that given by informants to registrars of births and deaths, or to clergymen before the publication of banns. The Toxteth-park Burial Board have provided for use, at their cemetery in Smithdown-road, a form which is in all its details very complete. This must be signed by the person responsible—i.e., the father, mother, occupier of the house, or person present at the birth. The registrar is most careful to read over the declaration and the penalty clause. This form and these precautions are examples which might well be followed elsewhere. For medical practitioners a form of certificate of stillbirth has been issued by the Registrar-General, as intimated in THE LANCET some months ago, and books of forms can be had either direct or from the registrar of any subdistrict.

Liverpool and Neighbouring Health Resorts.

Although the weather cannot be called settled as yet, many of the inhabitants of this crowded city have availed

themselves of the proximity of the many seaside resorts which are so easy of access from Liverpool. To those who can reside for some time at the seaside, New Brighton, Hoylake, and West Kirby offer many advantages, being all now accessible by rail. On the Lancashire side Seaforth, Waterloo, and Southport are favourite localities, especially the latter. To those who have little or no reason to dread *mal de mer*, the Isle of Man affords a complete change and an air almost as bracing as the deck of a steamer, while the voyage is much shortened. In addition to Douglas and Ramsey, the central and northern towns, Castletown, Port Erin, and Port St. Mary in the south, with Peel in the west, have all excellent hotels and comfortable lodgings for visitors. To those who can only afford a day's holiday at a time the sail to and from Douglas, Llandudno, Beaumaris, or Menai Straits is both health-giving and pleasurable. Monthly and season tickets can be obtained on most moderate terms, enabling those who may wish to do so to spend a considerable portion of each day at sea, sleeping in England or Wales each night.

June 22nd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

A Medical School Board Officer wanted.

THE Newcastle School Board, wishful to appoint a medical officer of their own to certify as to the health of their officers and to fulfil other duties, are about to make this appointment. It strikes one, however, that the board have not been at all "lavish" in their remuneration. The medical officer will have to examine all teachers seeking appointments under the board and visit all the staff who may be laid up with any serious illness. The board have, I believe, about 400 teachers alone. The sum offered, as pointed out by a member, is quite inadequate. It has a fine sound in "guineas"; but when reduced to vulgar and everyday sterling money it amounts to 10*s.* 6*d.* per week, or just half as much as they would probably offer to their porter or messenger. The appointment should, by right, go a long time "begging."

Municipal Visit to Newcastle.

A large deputation from the Leeds Corporation visited Newcastle on Saturday last for the purpose of inspecting the new city fever hospital. The members expressed themselves highly pleased with what they had seen, and the ex-Mayor of Leeds said they considered the hospital superior to anything they had seen. The deputation was afterwards entertained to luncheon by the Mayor of Newcastle, when it was stated that the Leeds Corporation have just acquired a very large estate, about three miles from Leeds, called Mannsfield Hall and containing about eighty acres, for the purpose of erecting a large fever hospital, and, in addition, they intend to build a convalescent hospital for patients upon the same estate.

The Newcastle Cathedral Nurse and Loan Society.

The annual meeting of this Society has been held, and the report showed a very large amount of work had been done during the past year, for 19,252 visits had been paid, and the night nurses had been out 848 times. The Convalescent Home of the Society at Shotley Bridge had proved most valuable, and the Home at Hexham was also in progress. The plans for the site had passed the local board, and the contract had been signed for the building; it is hoped that before the next report the building will be finished and in full working order. About £1000 are, however, still wanted to meet all necessary expenses.

Two Children poisoned by Hemlock.

Two little girls, sisters, aged four and nine, were unfortunately poisoned by hemlock at Newton Hall, near Corbridge, last week. The children were playing in a field where their mother was working and found the poisonous plants which were growing in a quarry hole near at hand. The younger child died the same night, and her sister the next day. The rector of the parish has written to the papers to urge the necessity of making children acquainted with the poisonous plants of their district; he considers that this instruction might be very well given in the schools.

Darlington and Cremation.

As a result of a ballot taken in Darlington as to the granting of a way leave through the cemetery to the crematorium there, the result showed 4110 votes against and 53 in favour of the granting of the way leave to the cremationists.

Small-pox at Middlesbrough.

A fatal case of small-pox has occurred at Middlesbrough. The medical officer of health, Dr. Malcomson, reported the removal of a Spanish sailor from a vessel which had arrived in the Tees from Bilbao. The man, he said, was nearly at the Fever Hospital when he heard of the case, when he should have been sent to the Small-pox Hospital floating in the river, but he did not deem it advisable to take him back through the town. Dr. Malcomson speaks of the imperfect instructions given to foreign vessels having infective diseases aboard. The crews cannot speak English, much less read it, and he very properly suggests that the code of instructions suitable for these cases should be translated and printed in the various continental languages, so that captains would understand how to communicate with the officials on shore in cases of sickness and that they must not send them on shore without authority. The man, I hear, has since died.

Carlisle and its Water-supply.

The people of Carlisle are much exercised as to their water-supply, which is at present far short of the requirements of the city and district. Fortunately, however, the sources of supply are not far distant; and further, Mr. J. G. Goodchild of Edinburgh has shown in a paper lately read the great probability of there being an abundant supply under the Penrith sandstone along the western bank of the River Eden; but it is likely that the Carlisle people will find their supply nearer to their city. At all events, it is merely an engineering question now, and not at all a difficult one.

Death of Mr. J. J. Johnstone of Brampton.

Mr. J. J. Johnstone of Brampton, near Carlisle, died last Wednesday at his residence, The Hollies, in his eighty-fourth year. Mr. Johnstone came into the district about fifty-seven years ago and had an extensive general practice; he was also a skilful operator. About twelve years ago, through failing sight and health, he was compelled to relinquish his practice. He held during his time of professional activity many appointments. Mr. Johnstone has left a widow and two daughters.

Mrs. Ostle of Birkby has bequeathed to the Cumberland Infirmary £200 and to the Royal Albert Asylum, Lancaster, £50.

The amount subscribed towards the public memorial in Berwick to the late Dr. P. W. Maclagan has now reached £100.

Newcastle-on-Tyne, June 22nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Appointment of Pathologists to the Edinburgh Royal Infirmary.

AT a meeting of the managers of the Royal Infirmary on Monday, Dr. Robert Muir and Dr. R. F. C. Leith were appointed pathologists in succession to Dr. W. Russell, who has become an assistant-physician, and Dr. W. H. Barrett, who has gone to Belfast as lecturer on pathology. Both Dr. Muir and Dr. Leith were distinguished students, and both are teaching pathology, the former inside the University, the latter in the Extra-mural School.

Scottish Universities Commission.

The Commission resumed some time ago its sittings in Edinburgh, and has been engaged in rehearing evidence as to the place of materia medica in the five years' curriculum. So far as can be ascertained the Professor of Materia Medica does not seem to be in harmony with his colleagues on this question. In fact, it is said that the reopening of this question was a surprise to some of them. This week the Commission has been examining witnesses regarding the redistribution of chairs between St. Andrews and University College, Dundee.

The Health of Edinburgh.

The mortality last week was 52, making the death-rate 10·0 per 1000. Diseases of the chest caused 23 deaths and

zymotic diseases 3, all of which were due to whooping-cough. The intimations for the week were: typhoid fever, 2; diphtheria, 4; scarlet fever, 34; measles, 76.

Action under the Public Health (Scotland) Act.

A case has been before the sheriff of Midlothian, in which the pursuer sues one of the district committees of the Midlothian County Council. The pursuer alleged that in January last, in consequence of a case of scarlet fever being notified in his house, the medical officer of the county ordered the pursuer to close his shop in which he carried on the business of a restaurateur, and that he had done so for six weeks. The pursuer estimated his loss at £50. The defenders denied the statements as to the pursuer being ordered to close his premises, and explained that all that was insisted on was that the child should be isolated. The sheriff has dismissed the action, and in his note states that where damage has been sustained by reason of the acts or operations of a public body not authorised by the statute under which it acts, the remedy is by an action of damages at common law, and not by a claim for compensation under the statute. He, however, does not find in the Act anything which would empower the defenders or their medical officer to issue and enforce the order of which the pursuer complained, and he is therefore of opinion that the pursuer's remedy is by an ordinary action of damages if he can show that the defenders or their medical officer exceeded their statutory powers. This is said to be the first occasion on which the question has been decided in a law court.

The City Hospital, Edinburgh.

The Public Health Committee of the Edinburgh Town Council have decided to ask the Council to authorise the expenditure of £550 for the establishment of a hot-water apparatus to the hospital.

The Edinburgh University Court.

Amongst other matters before the Court last week was the continuance of the recognition of Professor Windle, Queen's College, Birmingham, as a teacher of anatomy on change of teaching rooms from Queen's College buildings to Mason's College. Dr. R. F. C. Leith was granted recognition as a teacher of practical pathology in Edinburgh.

June 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Mr. William Colles, F.R.C.S.I.

BY this gentleman's death a vacancy for a surgeon in ordinary to Her Majesty in Ireland has arisen. I understand that Mr. Philip Crampton Smyly, M.D. Dub., F.R.C.S.I., is a candidate for the post, and his selection would give general satisfaction. Mr. Smyly is surgeon to the Meath Hospital and a member of the medical staff to the Lord-Lieutenant. Of unsullied reputation, strictly honourable in every transaction of life, he has the respect and esteem of his professional brethren and of the community at large. No better selection could be made than the appointment of Mr. Smyly as Mr. Colles' successor.

Adelaide Hospital, Dublin.

The Hudson Scholarship, consisting of a gold medal and a cheque for £30, has this year been awarded to Mr. T. E. B. Meyler, and the Hudson prize—a silver medal and £10—to Mr. F. W. Staunton. These prizes were established in memory of the late Dr. Alfred Hudson, an eminent physician for some years attached to the hospital. The subjects for examination are numerous and the competition keen for the rewards offered by the authorities of the institution.

Dublin University Tercentenary.

The following is the amended programme for the celebration of the tercentenary of the University, which will commence on July 5th and terminate on July 8th:—

Tuesday, July 5th.—10 A.M.: Reception of guests and delegates by the Provost in the Examination Hall. 11.30 A.M.: Commemoration service in St. Patrick's Cathedral, to which a procession will start from the Examination Hall; guests and delegates will be expected to attend in their academic robes or official costume. 3 P.M.: Cricket match in College Park—Cambridge Eleven *v.* Dublin University. 4 P.M.: Garden party in the Fellows' Garden. 9 P.M.: Performance of Tercentenary Ode by the University Choral Society in the Leinster Hall. 10 P.M.: Reception and ball by the Lord Mayor.

Wednesday, July 6th.—12 noon: Conferring of honorary degrees in the Examination Hall, Trinity College. 3 P.M.: Meeting in connexion with the graduates' memorial. 3 P.M.: Cricket match in the College Park. 3 P.M.: Garden party at the Viceregal lodge. 6.45 P.M. Tercentenary banquet in the Leinster Hall.

Thursday, July 7th.—11 A.M.: Procession in academic robes or official costume from Trinity College to Leinster Hall. 11.30 A.M.: Presentation of addresses by the delegates in the Leinster Hall. 4 to 6 P.M.: Garden party at the Royal Hospital. 8 P.M.: Dramatic performance in the Gaiety Theatre.

Friday, July 8th.—11 A.M.: Addresses to the students by certain of the University guests in the Examination Hall. 12.30 P.M.: College races in the College Park. 10 P.M.: University ball in the Leinster Hall.

The tercentenary medal to commemorate the event has on one side two heads—Elizabeth and Victoria—and the dates 1592 and 1892, with the motto "Ab Elizabetha ad Victoriam"; while on the other side are the arms of the College, and the words, "Trinity College, Dublin, Tercentenary." The medal has no raised rim, and is two inches and a half in diameter, and can be had in bronze or silver. On Saturday the Board of Trinity College received a memorial signed by 10,000 Irish ladies, asking that from the date of the tercentenary the educational benefits of the University may be extended to females.

At a meeting of the Board of Governors of the Catholic University School of Medicine, held on Tuesday, the 14th inst., it was decided to create a chair of Pathology and Bacteriology, the incumbent of which is to have a seat upon the Medical Faculty. It was also resolved that Mr. Edmond J. McWeeney, M.A., M.D., Pathologist to the Mater Misericordiæ Hospital, be appointed to the new chair.

June 21st.

Obituary.

WILLIAM COLLES, M.D. T.C.D., F.R.C.S.I.

MR. COLLES died on June 18th at his residence in Stephen's-green, Dublin, in his eighty-fourth year. He was the son of the celebrated Abraham Colles, who was Professor of Surgery, Anatomy, and Physiology in the Royal College of Surgeons in Ireland and President of that institution when only twenty-eight years of age. Mr. William Colles was educated at the Fenisiglian School, and graduated in Arts in the University of Dublin in 1831, and ten years later in Medicine. He studied at Steevens' Hospital and the School of the College of Surgeons. In 1831 he was admitted a licentiate of the College, and was President in 1863-4. Mr. Colles retained a seat on the Council of the College until the last few weeks, and held the post of secretary and librarian for twenty-seven years, having been succeeded on the 6th inst. by Sir Charles Cameron. He was a visiting surgeon for many years to Steevens' Hospital, and for some time lecturer on surgery in the medical school attached thereto. Mr. Colles resigned the post of Regius Professor of Surgery in Trinity College, which is now held by Sir George Porter, and at the time of his death was Surgeon in Ordinary to Her Majesty in Ireland and consulting surgeon to the Rotunda Lying-in Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a recent meeting of the President, Vice-Presidents, and Council the following examiners were elected for the ensuing year:—Anatomy and Surgery: John Barton, William Stoker, Sir William Stokes, and William Thompson. Physiology, Histology, and Pathology: R. Glasgow Patteson and J. Alfred Scott. Chemistry and Physics: Robert J. Montgomery. Midwifery and Gynæcology: Samuel R. Mason. Ophthalmology: Patrick William Maxwell and Ferdinand Odevaine. Diploma in State Medicine: D. Edgar Flinn, J. Dallas Pratt, P. Crampton Smyly, and William Stoker. Midwifery Diploma: Samuel R. Mason, John J. Cranny, and Jeremiah O'Donovan. General Education: Frank J. Davys and Robert Morton.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have recently passed in the subjects indicated :—

Surgery.—A. Baldwin, Edinburgh ; W. R. Floyd, Cambridge and Liverpool ; A. D. Howard and A. J. Russell, London Hospital ; E. Howgate, Yorkshire College, Leeds ; C. T. Parsons, St. Mary's Hospital ; J. S. Tabb, Charing-cross Hospital ; P. M. Thomas, Cleveland, U.S.A. ; W. H. Waddington and J. D. Willis, Owens College ; R. B. Williams, St. Thomas's Hospital.

Medicine, Forensic Medicine, and Midwifery.—C. R. Batchellor and S. D. Gill, Queen's College, Birmingham ; J. N. Dobie, Cambridge and St. Mary's Hospital ; W. R. Floyd, Cambridge and Liverpool ; C. T. Parsons and W. F. Peacock, St. Mary's Hospital ; J. A. T. White, St. Bartholomew's Hospital.

Medicine and Midwifery.—J. Edwards and A. Greenwood, London Hospital ; W. Loades, Middlesex Hospital ; T. E. Pallett, Westminster Hospital ; S. J. Roberts, Guy's Hospital.

Forensic Medicine.—E. E. Frazer and W. K. Steele, Guy's Hospital ; J. H. Hobling, St. Mary's Hospital ; J. Kyffin, London Hospital.

Midwifery.—J. C. Netherton, Dublin.

To Messrs. Floyd, Frazer, Gill, Kyffin, Parsons, Steele, and Tabb was granted the diploma of the Society entitling them to practise Medicine, Surgery, and Midwifery.

PRESENTATION. — Dr. George B. Currie of Insch was presented on the 13th inst., prior to his leaving the district for British Honduras, with a gold watch by his friends and well wishers at Insch.

MATER MISERICORDIÆ HOSPITAL, DUBLIN.—At a recent examination the following prizes were awarded :—Leonard Prizes : Medical—Gold medal, J. O'Donnell ; silver medal, J. Brennan. Surgical—Gold medal, J. McGee ; silver medal, J. O'Donnell.

THE QUEEN has been pleased to give and grant unto Thomas Rawson Ker, Esq., and James Patrick Andrew Wilson, Esq., L.R.C.P., L.R.C.S. Edin, Her Majesty's Royal licence and authority that they may, respectively, accept and wear the Insignia of the Order of the Crown of Johore of the Third Class.

THE NEW SANATORIUM, SALFORD.—Alderman P. Keevney, the Mayor of the borough, formally opened on the 15th inst. the new Ladywell Sanatorium, or hospital for infectious diseases, for the borough, which has been erected on the Eccles New-road, near Eccles, at an outlay of £50,000.

GATES AND BARS, NORTH-WEST LONDON.—The St. Pancras Vestry has resolved to remove the gate in Gower-street, opposite University College Hospital. The vestry will purchase the roadway in Gower-street, between University College and the hospital, for £15,000. The authorities of University College are the freeholders, and this sum is to be applied towards rebuilding University College Hospital.

ROYAL (DICK) VETERINARY COLLEGE.—The new appointments in connexion with the Royal (Dick) Veterinary College consequent on the resignation of Prof. McFadyean are as follows :—Chair of Veterinary Surgery and Obstetrics : J. R. H. Dewar, F.R.C.V.S. ; Chair of Anatomy and Histology : A. E. Metham, M.R.C.V.S. ; Lectureship in Pathological Histology and College Assistant : S. Stockman, M.R.C.V.S. All three gentlemen are graduates of the College. Mr. Dewar was a distinguished member of Sir Joseph Lister's and other classes at the University. Mr. Metham gained the Dick Bursary for 1889, and was also first prizeman in the Fitzwygram competition for that year. Mr. Stockman, after graduation, went to Alfort and worked in Nocard's laboratory.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—The report for the past year shows a steadily maintained increase in the scope of the work of the Society. The discussions and papers read have been excellent and so numerous that a change in procedure has had to be adopted owing to pressure on the time of the Society. The following were elected office holders for the ensuing session :—President : Dr. Bell. Vice-president : Dr. Sutherland. Treasurer : Dr. Goyder. Council : Dr. Major, Dr. March, Mr. Farrow, Dr. Berry, and Messrs. Mercer and Wilmot. Secretaries : Drs. Hermann Bronner and J. J. Johnston. Librarians : Messrs. Althorpe and Pettitt. Pathologists : Dr. Major and Mr. Pettitt. Auditors : Drs. Foster and Whalley.

INCREASED DUTIES OF HEALTH OFFICERS.—In consideration of the extra duties imposed by the Public Health (London) Act, 1891, upon medical officers of health, the Vestry of St. Leonard, Shoreditch, have increased Dr. F. J. Allan's salary by £150.

BARON HIRSCH AND MEDICAL CHARITIES.—There is a great deal, says *Truth*, both written and spoken concerning the demoralising influence of racing, but as regards Baron Hirsch we have apparently a strong argument to the contrary. Baron Hirsch is just now distributing amongst the London hospitals a further large sum, the result of his winnings in the 1000 Guineas, the Oaks, and various other races, including the Derby, in which La Flèche ran second. Sums varying between £300 and £500, before these remarks see the light, will have been allotted to several deserving charities, and amongst others the Victoria Hospital for Children, Queen Charlotte's Hospital, the London Hospital, the North West London Hospital, St. George's Hospital, and the Hospital for Sick Children in Great Ormond-street will have benefited by the millionaire Baron's munificence. In future the running of Baron Hirsch's horses will be watched by the public with increased interest, seeing that his profits on the turf are apparently to be devoted to the relief of the and of the sick poor.

MEDICAL NOTES IN PARLIAMENT.

The Study of Inebriety.

IN the House of Lords on Friday, June 17th, petitions were presented by the Society for the Study of Inebriety in favour of further facilities for the reception of diseased inebriates in homes.

The Metropolitan Hospitals Committee.

In the House of Commons on Friday, June 17th, Mr. Ritchie moved that a message be sent to the Lords for a copy of the report of the Committee on Metropolitan Hospitals, Dispensaries, &c. The motion was agreed to. On the same day the message was received in the House of Lords, and it was agreed to accede to the request of the other House.

Infectious Hospitals Bill.

In the House of Lords on Tuesday, the 21st inst., Lord Thring moved the second reading of this Bill, and said it was brought in on the recommendation of the County Councils Association. The object of the Bill was to provide hospitals to which persons suffering from infectious diseases could be speedily removed, and where they would have the benefit of complete isolation. Where local application was made the County Council might provide for the establishment of an infectious hospital. It was necessary that the local application should be made by a rural or by an urban sanitary authority or by twenty-five ratepayers in any contributory place, and that this application should be supplemented by a report of the medical officer of health. The Bill provided for a local inquiry as to the necessity of hospital accommodation, and gave the district the right of appeal to the Local Government Board, a similar power being allowed as to the constitution of the hospital committee. The Bill was read a second time.

Medical Officers of Prisons.

Dr. Farquharson asked the Home Secretary whether he had received a communication from the chairman of the Parliamentary Bills Committee of the British Medical Association submitting to him a statement on behalf of the committee concerning certain hardships and disadvantages in the present duties, pay, and prospects of the medical officers of prisons ; and whether he was able to say that he would take measures to give effect to the suggestions set out in the memorial so submitted.—Mr. Matthews : Yes, sir ; a communication of the nature described from the chairman of the Parliamentary Committee of the British Medical Association has been received. I am well aware of the important and useful services rendered by this branch of prison officers, and any representations coming from them will meet with my most attentive consideration. It must be borne in mind, however, that the pay of the medical officers and assistants was revised and increased so lately as 1883. I do not feel able to say that I can make any recommendation to the Treasury upon the memorial referred to.

The Board of Agriculture.

A new standing order has been adopted by the House of Commons with reference to the deposit of Bills with the Board of Agriculture It sets forth that on or before Dec. 31st a printed copy shall be deposited at the office of the board "of every local Bill which relates to the drainage of land in England or Wales, or which relates to the improvement of land in England, Wales, or Scotland, or to the erection, improvement, repair, maintenance, or regulation of any market or market place at which cattle are exposed for sale, or to any matter within the jurisdiction of the Board of Agriculture, or which proposes to alter the boundary of any county, sanitary district, parish, or any other administrative area in the United Kingdom."

The Scarlet Fever Case at Fulham.

In the House of Lords on Thursday evening Lord Sandhurst called attention to the circumstances regarding this case of the girl who was removed by order of the magistrate from the Middlesex Hospital to the West London Fever Hospital under the idea that she was suffering from scarlet fever, although the child had been for six days in the Middlesex Hospital, where plenty of means of isolation were at hand. His lordship detailed the circumstances of the case, which were reported at length in the last issue of THE LANCET, and explained how Dr. Cayley, Senior Physician to the Middlesex Hospital, had gone to see the child out of pure philanthropy and with no expectation of a fee, and had determined that there were no

symptoms of scarlet fever in the case. The magistrate had taken it upon him to make some remarks upon Dr. Cayley, but he (Lord Sandhurst) did not think that the reputation of that distinguished gentleman was likely to suffer owing to the remarks of the police magistrate.—Lord De Ramsay, replying on behalf of the Government, said if the authority wielded by the Public Health Act was arbitrarily to tear children away from their parents, those children being the subject of great differences of opinion amongst doctors, then it was absolutely necessary to have the supreme control of the Home Office to keep medical officers in order. The noble lord, however, must remember that the medical officers had to be very careful in these matters, so as to take in time any cases of contagion, which might rapidly spread and cause much misery. At the same time, however, there was much difference of opinion amongst most competent men upon both sides. Then he could not but think that although the diagnosis might have been different, still it would be more advisable for the medical officer to have paused a little. The Home Secretary had not had the benefit of hearing the magistrate's views upon the case, as he was away on leave of absence and therefore he would make no remarks upon his action until he had heard what he had to say.—Lord Kimberley deprecated any arbitary administration of the Act, and said he was glad that the Home Secretary intended to get an explanation from the magistrate. If it were found that the magistrate had at all acted in the manner that the newspapers represented him to have done in this case, he hoped that the Home Office would in some way or other endeavour to prevent such vagaries in future.

The Shop Hours Bill.

The Select Committee on the Shop Hours Bill have issued their report. The Committee have amended the Bill by limiting it to the same protected classes as those to which the Shop Hours Act of 1886 applied. The proposal to extend to adult women the limitation as to hours which that Act provided only for persons under eighteen years of age is one which they do not at present feel justified in adopting. In view of the conflict of evidence, and of the limited amount of time remaining at the disposal of the Committee, they did not feel that they could at present take the responsibility of recommending the inclusion of adult women in the Bill. It appears to the Committee to be undesirable that the Shop Hours Act of 1886 should remain of doubtful and imperfect operation. They have therefore retained the clause which proposes that its provisions should be enforced by inspectors, but have modified the clause so that the enforcement should be a matter of local rather than imperial responsibility. To remove doubts domestic servants are expressly excluded, but in all other respects the law of 1886 is left as it stands, and the Committee think that the time has arrived for making its provisions permanent.

METROPOLITAN WATER-SUPPLY.

EVIDENCE OF DR. FRANKLAND.

ON Tuesday, before the Royal Commission, Dr. Frankland gave evidence on the Metropolitan Water-supply. At the outset he stated that, although he appeared at the request of the London County Council, the opinions he would have to express were entirely his own private opinions and for which the County Council were in no way responsible. During the last twenty-seven years he had paid special attention to the composition of water as delivered to London. The results of the numerous inspections and analyses he had made from time to time showed that above the points where water was abstracted from the Thames for the purpose of metropolitan supply were received contributions such as the drainage of manured land, the effluents from sewage works, and even raw sewage itself. This animal matter is probably generally innocuous, though sentimentally objectionable. It may, however, at any time be accompanied by zymotic poisons, such as those of typhoid fever, tuberculosis, or diphtheria. The chance of such pathogenic germs reaching the consumer is greatly reduced by the protective measures adopted by the water companies by means of filtration. Notwithstanding these protective measures, however, there is no trustworthy guarantee, in his opinion, that the noxious ingredients are wholly removed.

Professor Dewar: Have you considered the question of the probability—I am speaking now of the mere question of probability, apart altogether from strict modern chemical or bacteriological research—of such pathogenic germs being delivered and distributed in London water?—Yes, I have taken that into serious consideration, and I am at the present time engaged in a series of observations which will, I think—I hope, at all events—throw more light upon the subject. It is a point which requires a good deal of investigation yet. Of course, if we had any process of filtration which would remove every germ from water, that would be an almost absolute safeguard; it would be a single line of defence only, but it would be an absolute safeguard.

Witness then stated the results of recent experiments upon water as it left the filters of the various London companies, drawn from the Thames and Lea. He confessed his astonishment at the result that, instead of getting hundreds of germs in the cubic centimetre, as had been the case in London water, he got in some cases only four. If, however, there was only one single germ left, of course it might multiply afterwards into millions in a very short time. And during the passing of the water through the mains of London there is no doubt the microbes multiply, and hence the difference in the results of experiments on water coming through the filters and water as delivered in London. Of course if you removed from water the many thousands or tens of thousands of microbes or their germs, with the exception of one or even four, it is extremely unlikely that amongst those four you would have one pathogenic germ.

Have you made yourself any attempt to distinguish between the pathogenic germs and the harmless germs in London water?—No, I have not, and I have been deterred from doing so from the circumstance that Dr. Klein, who is a much more experienced bacteriologist than I am, has failed himself to distinguish the pathogenic germs in London water.

Witness admitted that recent discoveries in connexion with filtration had very considerably modified the opinions given by him as to the value of filtration in the Sixth Report of the Rivers Pollution Commission in 1874. At that time a number of very remarkable outbreaks of disease had been traced to impure water.

Take the conditions of a stream when precipitation and matter in suspension are being renewed continually. Such conditions cannot, of course, be favourable to the life of a large number of these organisms, but there has been no actual laboratory observations of that kind that you can refer us to that would guide us?—No. Of course it is difficult to imitate a flowing river in a laboratory. Several important experiments lead to the conclusion that pathogenic organisms very frequently fall a prey to the harmless ones when the latter are in a great majority; they can hold their own if they are in a majority, but the harmless organisms eat up the pathogenic ones if they are only present in small quantities. That is an additional reason why one would feel some security in the non-passage of those organisms through a considerable length of flowing water, because there is always present in such water a very large number of harmless micro-organisms.

So that the continuous change in the environment, together with continual and ever-changing motion—as in a river, exposure to light, the variations in suspended matter, and precipitation going on, combined with the presence of a large number of harmless micro-organisms, are all fatal towards the life of one or two specific ones; and that, combined with filtration, adds greatly to the security that they are not likely to pass and develop after they have been properly filtered?—Yes. At the same time I would point out that it by no means excludes the possibility of such organisms finally making their appearance in the water as drunk.

It only removes the fear in the sense that the probabilities are almost infinity to one against its occurring?—Yes, they are certainly considerably stronger than the opposite.

In reply to further questions put by Professor Dewar, witness said the vast majority of microbes found in potable waters are, as far as is known, perfectly harmless, and although pathogenic bacteria have been found amongst them it has only been on rare occasions, and not in connexion with the London water-supply. Pathogenical bacteria have been found in the tanks in India used by the natives there, amongst whom frequent outbreaks of cholera occur, and the cholera bacillus or cholera spirillum has been found in the water of those tanks, and there are several other cases in which a microbe has been found; but I do not think any one of them has occurred in England, certainly not in connexion with the London water-supply. At the same time it must not on this account be concluded that they are never present. In the first place, only a very small volume of water can be submitted to examination; and secondly, several kinds of pathogenic organisms can be cultivated only in the bodies of animals, and are therefore undiscoverable by Koch's gelatine plate process.

Then I understand you to convey that the mere appearance of a microbe similar to that of a pathogenic one would not be satisfactory to you as a bacteriologist, unless its action on the living organism was clearly proved to be pathogenic?—Yes, I should certainly think that that was absolutely necessary to establish its identity. These things are so small, and they resemble each other so closely, that it would be subject to great fallacy if you were to conclude merely from the appearance of these microbes that they were pathogenic microbes.

Sir A. Geikie: Once the identity of the microbe has been established, and you know the specific form of it, you can identify it always, can you not?—You can to some extent; but these microbes resemble each other so closely that no experimenter, I think, is ever satisfied unless he gains what is called a pure cultivation. By cultivating it in a proper medium he can get it free from all other kinds of microbes, then inject it under the skin of an animal, or administer it to a rabbit or a frog or some animal, and see whether it produces its proper pathogenic result.

The point I wanted to get at was whether you considered it at all possible or likely that we should ever be able to identify those microbes without going through that process of actual infection?—I think it is not at all impossible. I may illustrate what I mean by considering what would happen if the animals in the Zoological Gardens were all microscopic animals. How very difficult it would be to distinguish between a lion and a tiger, for instance, although there is no difficulty when you have them a sufficient size. The same difficulty is met with in the case of these microbes. For instance, this cholera spirillum is so closely allied in form to microbes that exist in human saliva that many eminent bacteriologists, at the time when Koch announced his discovery, said that they had plenty of the cholera spirilla in their own mouths. But it was a mistake. There is a cholera spirillum.

The Commission adjourned until Monday next.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ABRAM, G. S., L.R.C.P.Lond., M.R.C.S., has been appointed Assistant House Surgeon to the Devon and Exeter Hospital.

ANDERSON, L. M., M.R.C.S., has been reappointed Medical Officer to the Hearts of Oak Medical Fund.

BAILY, E., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Burgh of Oban.

BLAMEY, JAMES, M.R.C.S., has been reappointed Medical Officer for the Budock Sanitary District of the Falmouth Union.

BOOTH, DANIEL, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Sixth Sanitary District of the Ashton-under-Lyne Union, vice J. Schofield, deceased.

BOWLAN, M. M., M.B., B.S. Durh., L.R.C.S. Edin., has been appointed Assistant Medical Officer to the Union Infirmary, St. George's-in-the-East.

BRADSHAW, T. R., M.D., M.R.C.P. Lond., M.R.C.S., has been appointed Assistant Honorary Physician to the Royal Infirmary, Liverpool.

BROWNING, G. DANSEY, M.R.C.S., L.R.C.P. Lond., has been appointed Resident Obstetric Assistant to the Westminster Hospital.

BULMAN, F., M.B., C.M. Durh., has been appointed Medical Officer of the Workhouse, Newport, Mon.

BYLES, J. B., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Physician to the Westminster Hospital.

CAMPBELL, J. M., M.B., C.M. Glasg., has been appointed Medical Officer to the Workhouse, Newtown and Llanidloes Union.

CRAIG, W. WALLACE, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Salop Infirmary, Shrewsbury.

DE RENZI, H., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon to the Westminster Hospital.

EVERED, F., L.R.C.P., L.R.C.S., has been appointed Medical Officer for the Third District of the Westbourne Union.

FIELD, E., M.B., C.M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Municipal Charities, Bath.

GIBB, G., M.B., C.M. Aberd., has been appointed Third Medical Officer, and also Medical Officer to the Western District, Oilmachar Parochial Board.

GREENWOOD, G. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Ossett Urban Sanitary District of the Dewsbury Union, vice J. W. Greenwood, resigned.

HAMILTON, G. G., M.B., C.M. Edin., has been appointed Assistant Honorary Surgeon to the Royal Infirmary, Liverpool.

HAVELOCK, J. G., M.B., C.M. Edin., has been reappointed Senior Assistant Medical Officer to the Royal Asylum, Montrose.

HOWDEN, J. C., M.D. Edin., has been reappointed Medical Superintendent to the Royal Asylum, Montrose.

HUDSON, H. R., L.R.C.P., L.R.C.S. Irel., has been appointed Public Vaccinator, Newport, Monmouthshire.

LAWSON, T. C., M.R.C.S., has been appointed Medical Officer for the Wiggenhall Sanitary District of the Downham Union, vice C. Flood, resigned.

LEWIS, H. W., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Surgeon to the Westminster Hospital.

MILLS, H. H., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Physician to the Westminster Hospital.

MOORE, E. H., L.R.C.S. Edin., has been reappointed Medical Officer for the Mylor Sanitary District of the Falmouth Union.

NAPIER, A. D. LEITH, M.D. Aberd., M.R.C.P. Lond., F.R.S. Edin., has been appointed Assistant Physician to the Royal Maternity Charity.

PATON, R. J., M.B., C.M., L.R.C.P., L.R.C.S. Edin., has been appointed a District Medical Officer of the Newport (Mon.) Union.

PURSLOW, C. E., M.D. Lond., has been appointed Ingleby Examiner, Queen's College, Birmingham, for the current year.

RIDDELL, J. S., M.B., C.M. Aberd., has been appointed Medical Officer to the Infirmary, Oldmachar Parochial Board.

RUSSELL, JAS. W., M.B., B.C. Cantab., has been appointed Assistant Physician to the General Hospital, Birmingham.

RYAN-TENISON, E. H., M.R.C.S., has been appointed Medical Officer of Health for the Bexhill Urban Sanitary District of the Battle Union, vice J. P. B. Mills, resigned.

SCANLAN, A. E., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Linthorpe Sanitary District of the Middlesbrough Union, vice J. A. Malcomson.

SNOW, RAYMOND, L.R.C.P., L.R.C.S. Irel., has been reappointed Medical Officer of Health for the Llanwnog Sanitary District.

SOUTAR, R., M.B., C.M. Aberd., has been reappointed Medical Officer to the Royal Infirmary, Montrose.

STONE, V., M.D. St. And., F.R.C.S. Edin., has been reappointed Medical Officer to the Royal Infirmary, Montrose.

THOMAS, W. T., L.R.C.P. Edin., F.R.C.S. Eng., has been appointed Assistant Honorary Surgeon to the Royal Infirmary, Liverpool.

WEST, C. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Leadenham Sanitary District of the Sleaford Union, and for the Fulbeck Sanitary District of the Newark Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—House Surgeon.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—Dental Surgeon.

BOROUGH OF SCARBOROUGH.—Medical Officer of Health for the district of the borough for one year. Salary £325 per annum.

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House Surgeon. Salary £80 per annum, rising £10 per annum to £100, with board and lodging in the Infirmary. (Apply to the Honorary Secretary, 22, St. Mary's street, Bridgnorth.)

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary £100, with rooms and attendance.

COLONIAL HOSPITAL, Perth, Western Australia.—Resident Medical Officer and Assistant to the Superintendent of Vaccination. Salary £200 a year, with quarters in the hospital and board (excepting wines &c.). Passage out provided, conditionally. (Apply to the Agent-General for Western Australia, 15, Victoria-street, Westminster, London, S.W.)

DERBY PROVIDENT DISPENSARY.—Dispenser. Salary £78 and House.

DUNDEE ROYAL LUNATIC ASYLUM.—Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

DUNSTABLE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION, Dunstable, Beds.—Resident Medical Officer. Commencing salary £180, rising £10 per annum to £220, with good residence, garden, and conservatory (rates and taxes free.) Conveyance provided.

GAMMA, THE LANCET Office, 423, Strand, W.C.—Surgeon to a Medical Aid Association. Salary for the first year £120, with house rent free. Salary increased by at least £10 the second year.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer for one year. Salary £130 per annum, with residence, board, and washing.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. Residence, board, and washing provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—Registrar and Pathologist. Honorarium 25 guineas per annum.

LEICESTER UNITED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION, 114, Highcross-street, Leicester.—Second Medical Officer. Salary £200 per annum, with midwifery fees.

MCGILL UNIVERSITY, Montreal, Canada.—Professorship of Pathology for the Faculties of Medicine and Comparative Medicine for one year. Salary for provisional appointment for one year £400 sterling. (Apply to the Dean, Montreal, Canada.)

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Assistant Medical Officer. Locum Tenens for two or three months—July, August, and September. No salary. Board, lodging, and washing, and travelling expenses provided.

PAROCHIAL BOARD OF PENNYGOWN AND TOROSAY, N.B.—Medical Officer. Salary from Board £100, cost of paupers' medicines included. (Apply to the Inspector of Poor of Torosay, Auchnacraig, by Oban.)

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Senior House Surgeon. Salary £75 per annum, with board and residence.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon. No salary. Board and rooms provided.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physics and Chemistry. Stipend £100 per annum.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Obstetric Tutor. Salary £50 per annum.

SWANSEA HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, furnished apartments, coal, gas, laundress, and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Physician. Salary £100 per annum, with board, lodging, and washing.

YORK DISPENSARY.—Resident Medical Officer. Salary £150 a year, with furnished apartments, coals, and gas.

Births, Marriages, and Deaths.

BIRTHS.

BAXENDELL.—On June 19th, at Dukinfield, Cheshire, the wife of Arthur Baxendell, M.R.C.S., L.S.A., of a son.

EMBLETON.—On June 12th, at St. Wilfrid's, Bournemouth, the wife of Dennis C. Embleton, M.R.C.S., L.R.C.P., of a son.

FRASER.—On June 17th, at Devon House, Mostyn-road, Brixton, S.W., the wife of Dr. E. Fraser, prematurely, of a daughter, stillborn.

GAGE-BROWN.—On June 20th, at 74, Cadogan-place, the wife of C. Herbert Gage Brown, M.D., of a son.

LUSH.—On Sunday, June 19th, at 4, Mansfield-gardens, Hampstead, the wife of Percy J. F. Lush, M.A., M.B. Oxon., M.R.C.S., of a son.

MACKENZIE.—On June 17th, at the Manor House, Much Wenlock, the wife of A. G. Mackenzie, F.R.C.S., M.R.C.P. Edin., of a daughter.

MANSBRIDGE.—On June 15th, at Grosvenor-gardens, Willesden-green, the wife of Josiah Mansbridge, L.R.C.P., M.R.C.S., of a daughter.

VICKERS.—On May 15th, at Suabo, Upper Burmah, Frances, the wife of Surgeon-Capt. Vickers, 6th Burmah Regiment, of a daughter (late of Sible Hedingham, Essex).

WADE.—On June 18th, at Ashwick Court, near Bath, the wife of Newton Wade, of a son.

MARRIAGES.

BRUNTON—DURNFORD.—On June 22nd, at St. Michael's, Chester-square, by the Rev. Canon Fleming, assisted by the Rev. Arthur Durnford, cousin of the bride, C. E. Brunton, M.B., M.R.C.S., of Linden House, Walthamstow, to Kathleen Brabazon, youngest daughter of the late Rev. A. G. Durnford, Vicar of Hindolveston, Norfolk.

COBBOLD—ADDISON.—On June 14th, at St. Mark's, Hamilton-terrace, Charles Spencer Cobbold, M.D., of Bailbrook House, Bath, son of the late T. Spencer Cobbold, M.D., F.R.S., to Lilly, widow of the late Capt. J. C. Addison, R.E., and daughter of F. Peterson Ward, 46, Hamilton-terrace, N.W.

COCKS—FOX.—On June 2nd, at St. Jude's Church, South Kensington, Surgeon-Captain Horace Cocks, M.B., Army Medical Staff, eldest son of J. Cocks, Esq., Kirkley Cliff, Lowestoft, to Kathleen Mary, only daughter of Captain Fox, of Kilcoursey, Cromwell-road, S.W.

MURRAY—BICKERSTETH.—On June 16th, at St. Luke's Church, Liverpool, George Redmayne Murray, M.R.C.P., of Newcastle-on-Tyne, to Annie Katharine, second daughter of E. R. Bickersteth, F.R.C.S., Liverpool.

SPILSBURY—BENCRAFT.—On June 15th, at the Parish Church, Bideford, Francis James Spilsbury, L.R.C.P., &c., of Warbleton, Sussex, third son of Major-General E. J. Spilsbury, H.M. Bengal Staff Corps, to Clara Louisa, third daughter of William Bencraft, late of Instow, North Devon.

WALKER—FAIRHAM.—On June 16th, at St. Alban's Church, Rochdale, by the Rev. W. Cooper, M.A., Vicar, James Pixton Walker, M.R.C.S., L.R.C.P., of Daisy Bank, Spotland-road, Rochdale, elder son of Roger Walker, L.D.S., of Alliston House, Urmston, to Mildred, elder daughter of William Fairham, of Landseer House, Rochdale.

DEATHS.

EVES.—On June 16th, at Goldney-road, Clifton, Augustus William Eves, M.R.C.S., eldest son of the late Augustus Eves, M.D., of Cheltenham.

HILL-WOOD.—On June 17th, at Westgate-on-Sea, Penelope Wood, younger daughter of T. Wood Hill, L.R.C.P., M.R.C.S., L.S.A., aged twelve years, formerly of Earl's Court-road, Kensington.

LANGFORD.—On June 16th, at Older's hill, Finchley, Phineas Pitts Langford, M.D., M.R.C.S., late of Park House, East Finchley.

PARSONS.—On June 20th, Joshua Parsons, M.R.C.S., of North End, Frome, aged 77.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 23rd 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 17	29·96	N.W.	54	48	113	62	48	09	Cloudy
" 18	29·99	N.W.	53	47	112	65	46	..	Fine
" 19	29·89	W.	57	51	122	67	49	·01	Cloudy
" 20	29·85	W.	56	51	117	68	47	·06	Cloudy
" 21	29·90	S.W.	59	53	110	69	49	·03	Cloudy
" 22	29·91	S.W.	62	58	120	75	57	·04	Overcast
" 23	29·51	S.W.	54	53	..	58	53	·20	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

THE THERAPEUTIC USES OF IRON.

THE tonic and hæmatinic properties of iron were well known to the ancients. The old way of administering this metal was very curious. The metal being very much used in the preparation of weapons of warfare and Mars being the god of war, Mars became the patron of iron; and very frequently in old books we read of the "martial preparations," by which is meant preparations of iron, and the mode of administering them was to put a sword into a water-trough and allow it to lie there and rust, and to let the people drink of the water. Of course, it was a very mild chalybeate water that could be got in this way. But still, very mild preparations of iron, if continued for a long period of time, will produce a very marked effect; and distinct results were obtained in ancient times from this very mild way of giving iron.

Rex.—The placing an unqualified assistant in a separate house and two miles away from his principal would be very apt to be regarded by the Medical Council as "covering," even under the theoretical conditions described by our correspondent. We cannot at the time of going to press refer to the prescription alluded to.

Dr. Fred. Robinson.—For particulars regarding the conditions under which English medical practitioners are allowed to practise in France our correspondent should consult our last Students' Number, Sept. 5th, 1891.

POLICE DUTY.

To the Editors of THE LANCET.

SIRS,—I am frequently called to decide at a police-station the often very knotty question as to whether the party detained is drunk or has been drinking. The first point there is not often any difficulty in deciding; but the second, in my opinion, is not so soon ascertained. Will some of your readers give me their reasons *pro* and *con*, or refer to the title of some little work on this and other subjects, and oblige

Yours truly.

June 19th, 1892. W. Y.

AN APOLOGY.

To the Editors of THE LANCET.

SIRS,—Our attention has been drawn to the fact that in our work on Diseases of the Rectum and Anus, second edition, p. 191, Mr. Harrison Cripps' name has been omitted in connexion with our description of laminar carcinoma. It is from his work that our account has been drawn; and we beg to acknowledge our indebtedness to him, and regret at the same time the oversight which has occurred.

We are, Sirs, yours truly,

ALFRED COOPER.

June 20th, 1892. F. SWINFORD EDWARDS.

ADVERTISING HANDBILLS.

Visitor sends us a specimen of a very unprofessional handbill, extensively circulated, offering, at 55, Park-road, Hornsey, advice and medicines on cheap terms, and saying that the establishment is conducted by a married, fully qualified, registered and experienced physician and surgeon, who has the discretion not to insert his name.

M.—The question is a legal one. Our correspondent should see the solicitor. His claim is against A, who presumably sent for him, and A or his solicitor should have asked for his account prior to the settlement. But some patients are much more anxious about compensation than costs.

Dolphin will have the title conceded to him in courtesy by many; but we should not advise his using it on a card or plate. He is justified in styling himself "physician and surgeon."

Mr. J. Doughty should apply to the medical officer of health of the town in question.

Query has not enclosed his card.

"KILLED BY AN EMETIC."

To the Editors of THE LANCET.

SIRS,—With reference to your paragraph in last week's issue, headed "Killed by an Emetic," may I be permitted to make a few remarks in the absence of the medical gentleman who gave evidence at the inquest?

A man was found dead one morning after he had taken some poison and after common salt had been administered as an emetic. A post-mortem examination was made and I was present at it. The whole of the stomach was in a very congested state; several portions were very much softened and there were two perforations which had allowed of the escape of the stomach contents into the peritoneal cavity. The glass from which the patient had drunk the poison was given to me and in it I found a few crystals, which, on being tested, proved to be sulphate of zinc. Moreover, it came out in the evidence that that salt had been sold to the deceased. An interesting question, then, seems to be opened up. Is sulphate of zinc a safe emetic? It is hardly possible that the small quantity which had been swallowed should have alone produced such very violent effects on the stomach wall, and the theory that the chloride was formed by the addition of common salt to the solution in the stomach would satisfactorily explain the congestion and perforation. Perhaps some of your readers may have met with parallel cases.—I am, Sirs, yours faithfully,

A. L. MACLEOD, M.A., M.B.,

June 21st, 1892. House Surgeon, Macclesfield General Infirmary.

DISTRICT MEDICAL OFFICERS AND SUPERANNUATION.

To the Editors of THE LANCET.

SIRS,—I am a district medical officer of over thirty years' service and am now resigning on account of ill-health, but have not yet reached sixty years of age. Am I entitled to the two-thirds superannuation pension?

I am, Sirs, yours faithfully,

June 15th, 1892. FIFTY-SIX.

*** As superannuation is not yet made compulsory it rests entirely with the guardians whether they will recommend the Local Government Board to grant superannuation. Without such a recommendation the district medical officer has no chance, whether he has served thirty or fifty years, or whether he has reached sixty years of age.—ED. L.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Althaus, London; Mr. Aitchison, Wallsend; Mr. N. W. Allt, London; Dr. H. Alderson, London; Dr. R. Broadbent, Leicester; Mr. H. T. Butlin, London; Mr. Baird, London; Mr. Burrows, London; Messrs. Black and Co, London; Mr. Baron, Manchester; Messrs. Burroughs and Wellcome, London; Mr. Bryan, London; Dr. Bateman; Mr. Buxey, Southampton; Mr. R. E. Cowper, Ontario; Dr. R. H. Creighton, Bally Shannon; Mr. Cooke, London; Mr. Cowell, London; Messrs. Cleave and Son, Crediton; Mr. Connop, Aix les-Bains; Messrs. Carver and Co, Forest-hill; Mr. Chapman, Huddersfield; Messrs. Crossley and Co., London; Mr. Cox, Manchester; Mr. Cross, Liverpool; Mr. J. Carter, London; Mr. Donaldson, Liverpool; Messrs. Dawson and Sons, London; Dr. Moh. El-Calamawy, Port Said; Dr. F. Swinford Edwards, London; Mr. F. W. Elder, Halifax; Mr. Fisk, London; Mr. A. Fousset, London; Dr. Hanbury Frere, London; Mr. George Foy, Dublin; Mr. Grieg, Clapton; Mr. Green, London; Mr. Graham, Scarborough; Mr. Harrison, Derby; Dr. Hyme, Bradford; Dr. Hare, Philadelphia; Mr. Hoskyns-Abrahall, Biggleswade; Dr. Hocken, Dunedin; Mr. Hutchinson, Haslemere; Mr. Hillier, Birchington-on-Sea; Mr. Hornibrook, London; Mr. George Heaton, Birmingham; Mr. F. B. Jessett, London; Mr. Jones, Llanelly; Mr. Watkin W. Jones, West Brighton; Mr. Kuhn, London; Mr. King, Liverpool; Mr. Little, London; Mr. Lord, London; Dr. Love, Belfast; Dr. Hugh Lane, Bath; Mrs. Levick, Paris; Mr. W. T. Law, London; Dr. A. L. Macleod, Macclesfield; Dr. Mead, Newmarket; Messrs. Mackie and Co., Warrington; Mr. Maconochie, London; Mr. Macadam, Edinburgh; Dr. Martin, Leith; Mr. Edmond J. McWeeney; Dr. Richard

BYLES, J. B., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Physician to the Westminster Hospital.

CAMPBELL, J. M., M.B., C.M. Glasg., has been appointed Medical Officer to the Workhouse, Newtown and Llanidloes Union.

CRAIG, W. WALLACE, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Salop Infirmary, Shrewsbury.

DE RENZI, H., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon to the Westminster Hospital.

EVERED, F., L.R.C.P., L.R.C.S., has been appointed Medical Officer for the Third District of the Westbourne Union.

FIELD, E., M.B., C.M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Municipal Charities, Bath.

GIBB, G., M.B., C.M. Aberd., has been appointed Third Medical Officer, and also Medical Officer to the Western District, Oldmachar Parochial Board.

GREENWOOD, G. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Ossett Urban Sanitary District of the Dewsbury Union, vice J. W. Greenwood, resigned.

HAMILTON, G. G., M.B., C.M. Edin., has been appointed Assistant Honorary Surgeon to the Royal Infirmary, Liverpool.

HAVELOCK, J. G., M.B., C.M. Edin., has been reappointed Senior Assistant Medical Officer to the Royal Asylum, Montrose.

HOWDEN, J. C., M.D. Edin., has been reappointed Medical Superintendent to the Royal Asylum, Montrose.

HUDSON, H. R., L.R.C.P., L.R.C.S. Irel., has been appointed Public Vaccinator, Newport, Monmouthshire.

LAWSON, T. C., M.R.C.S., has been appointed Medical Officer for the Wiggenhall Sanitary District of the Downham Union, vice C. Flood, resigned.

LEWIS, H. W., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Surgeon to the Westminster Hospital.

MILLS, H. H., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Physician to the Westminster Hospital.

MOORE, E. H., L.R.C.S. Edin., has been reappointed Medical Officer for the Mylor Sanitary District of the Falmouth Union.

NAPIER, A. D. LEITH, M.D. Aberd., M.R.C.P. Lond., F.R.S. Edin., has been appointed Assistant Physician to the Royal Maternity Charity.

PATON, R. J., M.B., C.M., L.R.C.P., L.R.C.S. Edin., has been appointed a District Medical Officer of the Newport (Mon.) Union.

PURSLOW, C. E., M.D. Lond., has been appointed Ingleby Examiner, Queen's College, Birmingham, for the current year.

RIDDELL, J. S., M.B., C.M. Aberd., has been appointed Medical Officer to the Infirmary, Oldmachar Parochial Board.

RUSSELL, JAS. W., M.B., B.C. Cantab., has been appointed Assistant Physician to the General Hospital, Birmingham.

RYAN-TENISON, E. H., M.R.C.S., has been appointed Medical Officer of Health for the Bexhill Urban Sanitary District of the Battle Union, vice J. P. B. Mills, resigned.

SCANLAN, A. E., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Linthorpe Sanitary District of the Middlesbrough Union, vice J. A. Malcomson.

SNOW, RAYMOND, L.R.C.P., L.R.C.S. Irel., has been reappointed Medical Officer of Health for the Llanwnog Sanitary District.

SOUTER, R., M.B., C.M. Aberd., has been reappointed Medical Officer to the Royal Infirmary, Montrose.

STONE, V., M.D. St. And., F.R.C.S. Edin., has been reappointed Medical Officer to the Royal Infirmary, Montrose.

THOMAS, W. T., L.R.C.P. Edin., F.R.C.S. Eng., has been appointed Assistant Honorary Surgeon to the Royal Infirmary, Liverpool.

WEST, C. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Leadenham Sanitary District of the Sleaford Union, and for the Fulbeck Sanitary District of the Newark Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—House Surgeon.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—Dental Surgeon.

BOROUGH OF SCARBOROUGH.—Medical Officer of Health for the district of the borough for one year. Salary £325 per annum.

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House Surgeon. Salary £80 per annum, rising £10 per annum to £100, with board and lodging in the Infirmary. (Apply to the Honorary Secretary, 22, St. Mary's street, Bridgnorth.)

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary £100, with rooms and attendance.

COLONIAL HOSPITAL, Perth, Western Australia.—Resident Medical Officer and Assistant to the Superintendent of Vaccination. Salary £200 a year, with quarters in the hospital and board (excepting wines &c.). Passage out provided, conditionally. (Apply to the Agent-General for Western Australia, 15, Victoria-street, Westminster, London, S.W.)

DERBY PROVIDENT DISPENSARY.—Dispenser. Salary £78 and House.

DUNDEE ROYAL LUNATIC ASYLUM.—Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

DUNSTABLE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION, Dunstable, Beds.—Resident Medical Officer. Commencing salary £180, rising £10 per annum to £220, with good residence, garden, and conservatory (rates and taxes free.) Conveyance provided.

GAMMA, THE LANCET Office, 423, Strand, W.C.—Surgeon to a Medical Aid Association. Salary for the first year £120, with house rent free. Salary increased by at least £10 the second year.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer for one year. Salary £130 per annum, with residence, board, and washing.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. Residence, board, and washing provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—Registrar and Pathologist. Honorarium 25 guineas per annum.

LEICESTER UNITED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION, 114, Highcross-street, Leicester.—Second Medical Officer. Salary £200 per annum, with midwifery fees.

MCGILL UNIVERSITY, Montreal, Canada.—Professorship of Pathology for the Faculties of Medicine and Comparative Medicine for one year. Salary for provisional appointment for one year £400 sterling. (Apply to the Dean, Montreal, Canada.)

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Assistant Medical Officer. Locum Tenens for two or three months—July, August, and September. No salary. Board, lodging, and washing, and travelling expenses provided.

PAROCHIAL BOARD OF PENNYGOWN AND TOROSAY, N.B.—Medical Officer. Salary from Board £100, cost of paupers' medicines included. (Apply to the Inspector of Poor of Torosay, Auchnacraig, by Oban.)

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Senior House Surgeon. Salary £75 per annum, with board and residence.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon. No salary. Board and rooms provided.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physics and Chemistry. Stipend £100 per annum.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Obstetric Tutor. Salary £50 per annum.

SWANSEA HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, furnished apartments, coal, gas, laundress, and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Physician. Salary £100 per annum, with board, lodging, and washing.

YORK DISPENSARY.—Resident Medical Officer. Salary £150 a year, with furnished apartments, coals, and gas.

Births, Marriages, and Deaths.

BIRTHS.

BAXENDELL.—On June 19th, at Dukinfield, Cheshire, the wife of Arthur Baxendell, M.R.C.S., L.S.A., of a son.

EMBLETON.—On June 12th, at St. Wilfrid's, Bournemouth, the wife of Dennis C. Embleton, M.R.C.S., L.R.C.P., of a son.

FRASER.—On June 17th, at Devon House, Mostyn-road, Brixton, S.W., the wife of Dr. E. Fraser, prematurely, of a daughter, stillborn.

GAGE-BROWN.—On June 20th, at 74, Cadogan-place, the wife of C. Herbert Gage-Brown, M.D., of a son.

LUSH.—On Sunday, June 19th, at 4, Mansfield-gardens, Hampstead, the wife of Percy J. F. Lush, M.A., M.B. Oxon., M.R.C.S., of a son.

MACKENZIE.—On June 17th, at the Manor House, Much Wenlock, the wife of A. G. Mackenzie, F.R.C.S., M.R.C.P. Edin., of a daughter.

MANSBRIDGE.—On June 15th, at Grosvenor-gardens, Willesden-green, the wife of Josiah Mansbridge, L.R.C.P., M.R.C.S., of a daughter.

VICKERS.—On May 15th, at Suabo, Upper Burmah, Frances, the wife of Surgeon-Capt. Vickers, 6th Burmah Regiment, of a daughter (late of Sible Hedingham, Essex).

WADE.—On June 18th, at Ashwick Court, near Bath, the wife of Newton Wade, of a son.

MARRIAGES.

BRUNTON—DURNFORD.—On June 22nd, at St. Michael's, Chester-square, by the Rev. Canon Fleming, assisted by the Rev. Arthur Durnford, cousin of the bride, C. E. Brunton, M.B., M.R.C.S., of Linden House, Walthamstow, to Kathleen Brabazon, youngest daughter of the late Rev. A. G. Durnford, Vicar of Hindolveston, Norfolk.

COBBOLD—ADDISON.—On June 14th, at St. Mark's, Hamilton-terrace, Charles Spencer Cobbold, M.D., of Bailbrook House, Bath, son of the late T. Spencer Cobbold, M.D., F.R.S., to Lilly, widow of the late Capt. J. C. Addison, R.E., and daughter of F. Peterson Ward, 46, Hamilton-terrace, N.W.

COCKS—FOX.—On June 2nd, at St. Jude's Church, South Kensington, Surgeon-Captain Horace Cocks, M.B., Army Medical Staff, eldest son of J. Cocks, Esq., Kirkley Cliff, Lowestoft, to Kathleen Mary, only daughter of Captain Fox, of Kilcoursey, Cromwell-road, S.W.

MURRAY—BICKERSTETH.—On June 16th, at St. Luke's Church, Liverpool, George Redmayne Murray, M.R.C.P., of Newcastle-on-Tyne, to Annie Katharine, second daughter of E. H. Bickersteth, F.R.C.S., Liverpool.

SPILSBURY—BENCRAFT.—On June 15th, at the Parish Church, Bideford, Francis James Spilsbury, L.R.C.P., &c., of Warbleton, Sussex, third son of Major-General E. J. Spilsbury, H.M. Bengal Staff Corps, to Clara Louisa, third daughter of William Bencraft, late of Instow, North Devon.

WALKER—FAIRHAM.—On June 16th, at St. Alban's Church, Rochdale, by the Rev. W. Cooper, M.A., Vicar, James Pixton Walker, M.R.C.S., L.R.C.P., of Daisy Bank, Spotland-road, Rochdale, elder son of Roger Walker, L.D.S., of Alliston House, Urmston, to Mildred, elder daughter of William Fairham, of Landseer House, Rochdale.

DEATHS.

EVES.—On June 16th, at Goldney-road, Clifton, Augustus William Eves, M.R.C.S., eldest son of the late Augustus Eves, M.D., of Cheltenham.

HILL WOOD.—On June 17th, at Westgate-on-Sea, Penelope Wood, younger daughter of T. Wood Hill, L.R.C.P., M.R.C.S., L.S.A., aged twelve years, formerly of Earl's Court-road, Kensington.

LANGFORD.—On June 16th, at Older's hill, Finchley, Phineas Pitts Langford, M.D., M.R.C.S., late of Park House, East Finchley.

PARSONS.—On June 20th, Joshua Parsons, M.R.C.S., of North End, Frome, aged 77.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 23rd 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 17	29·96	N.W.	54	48	113	62	48	09	Cloudy
,, 18	29·99	N.W.	53	47	112	65	46	..	Fine
,, 19	29·89	W.	57	51	112	67	49	·01	Cloudy
,, 20	29·85	W.	56	51	117	68	47	·06	Cloudy
,, 21	29·90	S.W.	59	53	110	69	49	·03	Cloudy
,, 22	29·91	S.W.	62	58	120	75	57	·04	Overcast
,, 23	29·51	S.W.	54	53	..	58	53	·20	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

THE THERAPEUTIC USES OF IRON.

THE tonic and hæmatinic properties of iron were well known to the ancients. The old way of administering this metal was very curious. The metal being very much used in the preparation of weapons of warfare and Mars being the god of war, Mars became the patron of iron; and very frequently in old books we read of the "martial preparations," by which is meant preparations of iron, and the mode of administering them was to put a sword into a water-trough and allow it to lie there and rust, and to let the people drink of the water. Of course, it was a very mild chalybeate water that could be got in this way. But still, very mild preparations of iron, if continued for a long period of time, will produce a very marked effect; and distinct results were obtained in ancient times from this very mild way of giving iron.

Rex.—The placing an unqualified assistant in a separate house and two miles away from his principal would be very apt to be regarded by the Medical Council as "covering," even under the theoretical conditions described by our correspondent. We cannot at the time of going to press refer to the prescription alluded to.

Dr. Fred. Robinson.—For particulars regarding the conditions under which English medical practitioners are allowed to practise in France our correspondent should consult our last Students' Number, Sept. 5th, 1891.

POLICE DUTY.

To the Editors of THE LANCET.

SIRS,—I am frequently called to decide at a police-station the often very knotty question as to whether the party detained is drunk or has been drinking. The first point there is not often any difficulty in deciding; but the second, in my opinion, is not so soon ascertained. Will some of your readers give me their reasons *pro* and *con*, or refer to the title of some little work on this and other subjects, and oblige

Yours truly.

June 19th, 1892. W. Y.

AN APOLOGY.

To the Editors of THE LANCET.

SIRS,—Our attention has been drawn to the fact that in our work on Diseases of the Rectum and Anus, second edition, p. 191, Mr. Harrison Cripps' name has been omitted in connexion with our description of laminar carcinoma. It is from his work that our account has been drawn; and we beg to acknowledge our indebtedness to him, and regret at the same time the oversight which has occurred.

We are, Sirs, yours truly,

ALFRED COOPER.

June 20th, 1892. F. SWINFORD EDWARDS.

ADVERTISING HANDBILLS.

Viator sends us a specimen of a very unprofessional handbill, extensively circulated, offering, at 55, Park-road, Hornsey, advice and medicines on cheap terms, and saying that the establishment is conducted by a married, fully qualified, registered and experienced physician and surgeon, who has the discretion not to insert his name.

M.—The question is a legal one. Our correspondent should see the solicitor. His claim is against A, who presumably sent for him, and A or his solicitor should have asked for his account prior to the settlement. But some patients are much more anxious about compensation than costs.

Dolphin will have the title conceded to him in courtesy by many; but we should not advise his using it on a card or plate. He is justified in styling himself "physician and surgeon."

Mr. J. Doughty should apply to the medical officer of health of the town in question.

Query has not enclosed his card.

"KILLED BY AN EMETIC."

To the Editors of THE LANCET.

SIRS,—With reference to your paragraph in last week's issue, headed "Killed by an Emetic," may I be permitted to make a few remarks in the absence of the medical gentleman who gave evidence at the inquest?

A man was found dead one morning after he had taken some poison and after common salt had been administered as an emetic. A post-mortem examination was made and I was present at it. The whole of the stomach was in a very congested state; several portions were very much softened and there were two perforations which had allowed of the escape of the stomach contents into the peritoneal cavity. The glass from which the patient had drunk the poison was given to me and in it I found a few crystals, which, on being tested, proved to be sulphate of zinc. Moreover, it came out in the evidence that that salt had been sold to the deceased. An interesting question, then, seems to be opened up. Is sulphate of zinc a safe emetic? It is hardly possible that the small quantity which had been swallowed should have alone produced such very violent effects on the stomach wall, and the theory that the chloride was formed by the addition of common salt to the solution in the stomach would satisfactorily explain the congestion and perforation. Perhaps some of your readers may have met with parallel cases.—I am, Sirs, yours faithfully,

A. L. MACLEOD, M.A., M.B.,

June 21st, 1892. House Surgeon, Macclesfield General Infirmary.

DISTRICT MEDICAL OFFICERS AND SUPERANNUATION.

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Neale; Mr. Offord; Messrs. Oppenheimer and Co.; Messrs. Orridge and Co., London; Mr. Osburne, Hythe; Dr. F. S. Palmer, East Sheen; Mr. Planner, London; Mr. J. Parrot, London; Messrs. Pooley and Son, London; Mr. F. T. Paul, Liverpool; Mr. A. Rajasingham, Aberdeen; Sir. W. Roberts, London; Mr. Rorie, Dundee; Dr. Russell, Glasgow; Dr. Fred. Robinson, London; Messrs. Robertson and Scott, Edinburgh; Mr. Steelhouse, Birmingham; Messrs. Shanks and Co., London; Mr. F. A. Southam, Manchester; Mr. E. M. Shirtleff, London; Dr. T. Sevill, London; Dr. Skrimshire, Blaenavon; Dr. J. C. Syson, Ayrshire; Dr. Herbert R. Spencer, London; Mr. Octavius Sturges, London; Mr. W. R. H. Stewart, London; Mr. W. Pickett Turner; Mr. J. H. Targett, London; Dr. Thomson, Norwich; Dr. J. Mackie Whyte, Dundee; Mr. Woodcock, Bolton Spa; Messrs. Wilson and Blessley, London; Messrs. Whitworth and Stuart, Newcastle-on-Tyne; Messrs. Waterlow and Sons, London; Mr. W. Yates, Richmond; W., London; Rex, London; Galen, London; Maltine Manufacturing Co., Bloomsbury; F. M., London; Superintendent, London; Nurse Monk, Buxton; 138A, Wandsworth-road, S.W.; Secretary, St. Luke's Hospital; Medicus, London; Assistant; Jeyes' Sanitary Compound Co., London; Chylos; Cappa; Dolphin; Secretary, Hospital for Sick Children, Bristol; M.; Perplexed; Query; Smedley's Hydropathic Establishment, Matlock; Teufel Remedial Appliances; *Birmingham Daily Post* Office; Rex; Surgeon; Scalpel, London; De Maatschappy Zeebad, Scheveningen, Holland; Janus, London; Agent-General, New Zealand; Scapula, London.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Dixey, Yarmouth; Mr. Walker, Rochdale; Mr. Stone, Paris; Dr. Couldrey, Colchester; Mr. Bayley, Margate; Miss Gough, London; Mr. Buller, Stowmarket; Mrs. Tyte, Minchinhampton; Mr. Tredinnick, Shropshire; Dr. Griggs, Ashbourne; Mr. Thin, Edinburgh; Mr. Standage, Birmingham; Mr. Fiske, Maidstone; Mr. Eccles, Derby; Mr. Wade, Bath; Dr. Duggan, Durham; Dr. Bourke, London; Mr. Fitzgerald, Queenstown; Mr. White, Eythorne; Mr. Lambert, Hull; Mr. Poole, Walthamstow; Miss Hooper, London; Mr. Crossley, Leicester; Dr. C. Williams, London; Mr. Baxendale, Dukinfield; Mr. Johnstone Edinburgh; Dr. Cobbold, Bath; Mr. Harrison, Derby; Messrs. Schweppe and Co., London; Mr. Daniell, Mitcham; Messrs. Giles, Schacht, and Co., Clifton; Dr. Collie, London; Mr. Bagster; Messrs. Armstrong and Paton, Manchester; Mr. White, Dunstable; Mr. Deemer, New Zealand; Mr. Griffith, Ruthin; Mr. Agar; Mr. Farquharson, Balla Chulish; Mr. Breach, Newbury; Mr. Heywood; Dr. Mukirjie, Upper Assam; Mr. Palmer, Dorset; Dr. Nevin, Durham; Mr. Norman, Ashburton; Mr. Harden, St. Mawes; Mr Taynton, London; Mr. Poole, Walthamstow; Mr. Brunton, Walthamstow; Mr. Hill, Westgate-on-Sea; Mr. Evans, Hereford; Volens, London; Essex, London; Beta Gamma, London; E. H., Stratford; M., London; Secretary, Jessop Hospital for Women; S., Southport; X., London; W. A. K., South Hackney; X. Y., London; H. F., London; Tenax, London; Class Rooms, Edinburgh; Gerald, Cheshire; Medicus, Addlestone; Union Assurance Society; Nucleolus, London; D. H., London; Medicus, Reading; M.B., London; X. Y. Z., London; Beta, London; Friendly, London; Medical, London; B. S., Leeds; Medicus, Hull; G. R. N., London; C., London; M.R.C.S., London; Nucleus, London; L. J., Portman-square; Coedmor, London; R. G., Bournemouth; Ajax, London; Secretary, Bristol General Infirmary; A. L., London; C. H., Birmingham; P. N. C., London; Hector, London; W. W.; Cardiac, London; Gracious; C. W., London.

NEWSPAPERS.—*Leicester Post, Public Opinion, North China Daily News, Cape Times, South Wales Daily News, Sussex Daily News, Surrey Comet, Folkestone Express, Inverness Courier, West London Observer, County Telephone (Salford), Levant Herald, Fulham Chronicle, Woodford Times, Putney News, Kentish Mercury, Ley on Express, Bromley Times, Glasgow Evening News, Citizen, Birmingham Gazette, Western Morning News, Sheffield Independent, &c.*, have been received.

Medical Diary for the ensuing Week.

Monday, June 27.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

NATIONAL ORTHOPÆDIC HOSPITAL (Great Portland-street, W.).—5 P.M. Mr. F. R. Fisher: Paralytic Deformities, Club-foot, &c.

Tuesday, June 28.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

Wednesday, June 29.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSTITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, June 30.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, July 1.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 2.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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